



Substitute Sequence Listing.ST25.txt
SEQUENCE LISTING

<110> Wyeth
O'Toole, Margot
Mounts, William M
Shojaee, Negin

<120> COMPOSITION AND METHOD FOR TREATING LUPUS NEPHRITIS

<130> 031896-091000

<140> US 10/718,834

<141> 2003-11-21

<150> US 60/428,065

<151> 2002-11-21

<160> 21

<170> PatentIn version 3.3

<210> 1

<211> 3652

<212> DNA

<213> Homo sapiens

<400> 1

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Substitute Sequence Listing.ST25.txt

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Substitute Sequence Listing.ST25.txt

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 gactaacgtg ctccggaagg gtggagggtt ctcttctaag tccttggtct aaagagcgct 3600
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<210> 2
 <211> 1162
 <212> PRT
 <213> Homo sapiens

<400> 2

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Asn Ser Pro Gly Ser Ser Gln His Pro Glu Ser Pro Arg Leu Pro Asn
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Pro Leu Trp Asp Arg Gly Lys Ile Gly Lys Val Glu Gly His Gln His
 35 40 45

Ile Gln Asp Phe Ser Gln Lys Ser His Leu Pro Ser Ile Val Val Glu
 50 55 60

Ser Ser Glu Val Asn Glu Glu Ser Gly Asp Leu His Leu Pro His Glu
 65 70 75 80

Glu Leu Leu Leu Leu Thr Asp Gly Glu Glu Glu Asp Ala Glu Ala Phe
 85 90 95

Phe Gln Asp Gln Ser Glu Glu Pro Gly Ala Ala Arg Pro His His Gln
 100 105 110

Ala Arg Gln Val Glu His Ser Thr Gln Arg Gly His Leu Glu Ile Arg
 115 120 125

Glu Leu Lys Lys Lys Leu Phe Lys Arg Arg Arg Val Leu Asn Arg Glu
 130 135 140

Arg Arg Leu Arg His Arg Val Val Gly Ala Val Ile Asp Gln Gly Leu
 145 150 155 160

Ile Thr Arg His His Leu Lys Lys Arg Ala Ala Gln Glu Leu Ser Gln
 165 170 175

Glu Ile Lys Ala Phe Leu Thr Gly Val Asp Pro Ile Leu Gly His Gln
 180 185 190

Substitute Sequence Listing.ST25.txt

Leu Ser Ala Arg Glu His Ala Arg Cys Gly Leu Leu Leu Leu Arg Ser
 195 200 205
 Leu Pro Pro Ala Arg Ala Ala Val Leu Asp His Leu Arg Gly Val Phe
 210 215 220
 Asp Glu Ser Val Arg Ala His Leu Ala Ala Leu Asp Glu Thr Pro Val
 225 230 235 240
 Ala Gly Pro Pro His Leu Arg Pro Pro Pro Pro Ser His Val Pro Ala
 245 250 255
 Gly Gly Pro Gly Leu Glu Asp Val Val Gln Glu Val Gln Gln Val Leu
 260 265 270
 Ser Glu Phe Ile Arg Ala Asn Pro Lys Ala Trp Ala Pro Val Ile Ser
 275 280 285
 Ala Trp Ser Ile Asp Leu Met Gly Gln Leu Ser Ser Thr Tyr Ser Gly
 290 295 300
 Gln His Gln Arg Val Pro His Ala Thr Gly Ala Leu Asn Glu Leu Leu
 305 310 315
 Gln Leu Trp Met Gly Cys Arg Ala Thr Arg Thr Leu Met Asp Ile Tyr
 325 330 335
 Val Gln Cys Leu Ser Ala Leu Ile Gly Ser Cys Pro Asp Ala Cys Val
 340 345 350
 Asp Ala Leu Leu Asp Thr Ser Val Gln His Ser Pro His Phe Asp Trp
 355 360 365
 Val Val Ala His Ile Gly Ser Ser Phe Pro Gly Thr Ile Ile Ser Arg
 370 375 380
 Val Leu Ser Cys Gly Leu Lys Asp Phe Cys Val His Gly Gly Ala Gly
 385 390 395 400
 Gly Gly Ala Gly Ser Ser Gly Gly Ser Ser Ser Gln Thr Pro Ser Thr
 405 410 415
 Asp Pro Phe Pro Gly Ser Pro Ala Ile Pro Ala Glu Lys Arg Val Pro
 420 425 430
 Lys Ile Ala Ser Val Val Gly Ile Leu Gly His Leu Ala Ser Arg His
 435 440 445
 Gly Asp Ser Ile Arg Arg Glu Leu Leu Arg Met Phe His Asp Ser Leu
 450 455 460

Substitute Sequence Listing.ST25.txt

Ala Gly Gly Ser Gly Gly Arg Ser Gly Asp Pro Ser Leu Gln Ala Thr
465 470 475 480

Val Pro Phe Leu Leu Gln Leu Ala Val Met Ser Pro Ala Leu Leu Gly
485 490 495

Thr Val Ser Gly Glu Leu Val Asp Cys Leu Lys Pro Pro Ala Val Leu
500 505 510

Ser Gln Leu Gln Gln His Leu Gln Gly Phe Pro Arg Glu Glu Leu Asp
515 520 525

Asn Met Leu Asn Leu Ala Val His Leu Val Ser Gln Ala Ser Gly Ala
530 535 540

Gly Ala Tyr Arg Leu Leu Gln Phe Leu Val Asp Thr Ala Met Pro Ala
545 550 555 560

Ser Val Ile Thr Thr Gln Gly Leu Ala Val Pro Asp Thr Val Arg Glu
565 570 575

Ala Cys Asp Arg Leu Ile Gln Leu Leu Leu Leu His Leu Gln Lys Leu
580 585 590

Val His His Arg Gly Gly Ser Pro Gly Glu Gly Val Leu Gly Pro Pro
595 600 605

Pro Pro Pro Arg Leu Val Pro Phe Leu Asp Ala Leu Lys Asn His Val
610 615 620

Gly Glu Leu Cys Gly Glu Thr Leu Arg Leu Glu Arg Lys Arg Phe Leu
625 630 635 640

Trp Gln His Gln Leu Leu Gly Leu Leu Ser Val Tyr Thr Arg Pro Ser
645 650 655

Cys Gly Pro Glu Ala Leu Gly His Leu Leu Ser Arg Ala Arg Ser Pro
660 665 670

Glu Glu Leu Ser Leu Ala Thr Gln Leu Tyr Ala Gly Leu Val Val Ser
675 680 685

Leu Ser Gly Leu Leu Pro Leu Ala Phe Arg Ser Cys Leu Ala Arg Val
690 695 700

His Ala Gly Thr Leu Gln Pro Pro Phe Thr Ala Arg Phe Leu Arg Asn
705 710 715 720

Leu Ala Leu Leu Val Gly Trp Glu Gln Gln Gly Gly Glu Gly Pro Ala
725 730 735

Substitute Sequence Listing.ST25.txt

Ala Leu Gly Ala His Phe Gly Glu Ser Ala Ser Ala His Leu Ser Asp
740 745 750

Leu Ala Pro Leu Leu Leu His Pro Glu Glu Glu Val Ala Glu Ala Ala
755 760 765

Ala Ser Leu Leu Ala Ile Cys Pro Phe Pro Ser Glu Ala Leu Ser Pro
770 775 780

Ser Gln Leu Leu Gly Leu Val Arg Ala Gly Val His Arg Phe Phe Ala
785 790 795 800

Ser Leu Arg Leu His Gly Pro Pro Gly Val Ala Ser Ala Cys Gln Leu
805 810 815

Leu Thr Arg Leu Ser Gln Thr Ser Pro Ala Gly Leu Lys Ala Val Leu
820 825 830

Gln Leu Leu Val Glu Gly Ala Leu His Arg Gly Asn Thr Glu Leu Phe
835 840 845

Gly Gly Gln Val Asp Gly Asp Asn Glu Thr Leu Ser Val Val Ser Ala
850 855 860

Ser Leu Ala Ser Ala Ser Leu Leu Asp Thr Asn Arg Arg His Thr Ala
865 870 875 880

Ala Val Pro Gly Pro Gly Gly Ile Trp Ser Val Phe His Ala Gly Val
885 890 895

Ile Gly Arg Gly Leu Lys Pro Pro Lys Phe Val Gln Ser Arg Asn Gln
900 905 910

Gln Glu Val Ile Tyr Asn Thr Gln Ser Leu Leu Ser Leu Leu Val His
915 920 925

Cys Cys Ser Ala Pro Gly Gly Thr Glu Cys Gly Glu Cys Trp Gly Ala
930 935 940

Pro Ile Leu Ser Pro Glu Ala Ala Lys Ala Val Ala Val Thr Leu Val
945 950 955 960

Glu Ser Val Cys Pro Asp Ala Ala Gly Ala Glu Leu Ala Trp Pro Pro
965 970 975

Glu Glu His Ala Arg Ala Thr Val Glu Arg Asp Leu Arg Ile Gly Arg
980 985 990

Arg Phe Arg Glu Gln Pro Leu Leu Phe Glu Leu Leu Lys Leu Val Ala
995 1000 1005

Substitute Sequence Listing.ST25.txt

Ala Ala Pro Pro Ala Leu Cys Tyr Cys Ser Val Leu Leu Arg Gly
1010 1015 1020

Leu Leu Ala Ala Leu Leu Gly His Trp Glu Ala Ser Arg His Pro
1025 1030 1035

Asp Thr Thr His Ser Pro Trp His Leu Glu Ala Ser Cys Thr Leu
1040 1045 1050

Val Ala Val Met Ala Glu Gly Ser Leu Leu Pro Pro Ala Leu Gly
1055 1060 1065

Asn Met His Glu Val Phe Ser Gln Leu Ala Pro Phe Glu Val Arg
1070 1075 1080

Leu Leu Leu Leu Ser Val Trp Gly Phe Leu Arg Glu His Gly Pro
1085 1090 1095

Leu Pro Gln Lys Phe Ile Phe Gln Ser Glu Arg Gly Arg Phe Ile
1100 1105 1110

Arg Asp Phe Ser Arg Glu Gly Gly Gly Glu Gly Gly Pro His Leu
1115 1120 1125

Ala Val Leu His Ser Val Leu His Arg Asn Ile Asp Arg Leu Gly
1130 1135 1140

Leu Phe Ser Gly Arg Phe Gln Ala Pro Ser Pro Ser Thr Leu Leu
1145 1150 1155

Arg Gln Gly Thr
1160

<210> 3
<211> 1162
<212> PRT
<213> Artificial

<220>
<223> A variant of the human BFLP1698 polypeptide

<400> 3

Met Ala Leu Val Pro Gly Arg Ser Lys Glu Asp Gly Leu Trp Thr Arg
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Asn Ser Pro Gly Ser Ser Gln His Pro Glu Ser Pro Arg Leu Pro Asn
20 25 30

Pro Leu Trp Asp Arg Gly Lys Ile Gly Lys Val Glu Gly His Gln His
35 40 45

Ile Gln Asp Phe Ser Gln Lys Ser His Leu Pro Ser Ile Val Val Glu
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Substitute Sequence Listing.ST25.txt

50

55

60

Ser Ser Glu Val Asn Glu Glu Ser Gly Asp Leu His Leu Pro His Glu
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Glu Leu Leu Leu Leu Thr Asp Gly Glu Glu Glu Asp Ala Glu Ala Phe
85 90 95

Leu Gln Asp Gln Ser Glu Glu Pro Gly Ala Ala Arg Pro His His Gln
100 105 110

Ala Arg Gln Val Glu His Ser Thr Gln Arg Gly His Leu Glu Ile Arg
115 120 125

Glu Leu Lys Lys Lys Leu Phe Lys Arg Arg Arg Val Leu Asn Arg Glu
130 135 140

Arg Arg Leu Arg His Arg Val Val Gly Ala Val Ile Asp Gln Gly Leu
145 150 155 160

Ile Thr Arg His His Leu Lys Lys Arg Ala Ala Gln Glu Leu Ser Gln
165 170 175

Glu Ile Lys Ala Phe Leu Thr Gly Val Asp Pro Ile Leu Gly His Gln
180 185 190

Leu Ser Ala Arg Glu His Ala Arg Cys Gly Leu Leu Leu Leu Arg Ser
195 200 205

Leu Pro Pro Ala Arg Ala Ala Val Leu Asp His Leu Arg Gly Val Phe
210 215 220

Asp Glu Ser Val Arg Ala His Leu Ala Ala Leu Asp Glu Thr Pro Val
225 230 235 240

Ala Gly Pro Pro His Leu Arg Pro Pro Pro Pro Ser His Val Pro Ala
245 250 255

Gly Gly Pro Gly Leu Glu Asp Val Val Gln Glu Val Gln Gln Val Leu
260 265 270

Ser Glu Phe Ile Arg Ala Asn Pro Lys Ala Trp Ala Pro Val Ile Ser
275 280 285

Ala Trp Ser Ile Asp Leu Met Gly Gln Leu Ser Ser Thr Tyr Ser Gly
290 295 300

Gln His Gln Arg Val Pro His Ala Thr Gly Ala Leu Asn Glu Leu Leu
305 310 315 320

Gln Leu Trp Met Gly Cys Arg Ala Thr Arg Thr Leu Met Asp Ile Tyr
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Substitute Sequence Listing.ST25.txt

325

330

335

Val Gln Cys Leu Ser Ala Leu Ile Gly Ser Cys Pro Asp Ala Cys Val
 340 345 350

Asp Ala Leu Leu Asp Thr Ser Val Gln His Ser Pro His Phe Asp Trp
 355 360 365

Val Val Ala His Ile Gly Ser Ser Phe Pro Gly Thr Ile Ile Ser Arg
 370 375 380

Val Leu Ser Cys Gly Leu Lys Asp Phe Cys Val His Gly Gly Ala Gly
 385 390 395 400

Gly Gly Ala Gly Ser Ser Gly Gly Ser Ser Ser Gln Thr Pro Ser Thr
 405 410 415

Asp Pro Phe Pro Gly Ser Pro Ala Ile Pro Ala Glu Lys Arg Val Pro
 420 425 430

Lys Ile Ala Ser Val Val Gly Ile Leu Gly His Leu Ala Ser Arg His
 435 440 445

Gly Asp Ser Ile Arg Arg Glu Leu Leu Arg Met Phe His Asp Ser Leu
 450 455 460

Ala Gly Gly Ser Gly Gly Arg Ser Gly Asp Pro Ser Leu Gln Ala Thr
 465 470 475 480

Val Pro Phe Leu Leu Gln Leu Ala Val Met Ser Pro Ala Leu Leu Gly
 485 490 495

Thr Val Ser Gly Glu Leu Val Asp Cys Leu Lys Pro Pro Ala Val Leu
 500 505 510

Ser Gln Leu Gln Gln His Leu Gln Gly Phe Pro Arg Glu Glu Leu Asp
 515 520 525

Asn Met Leu Asn Leu Ala Val His Leu Val Ser Gln Ala Ser Gly Ala
 530 535 540

Gly Ala Tyr Arg Leu Leu Gln Phe Leu Val Asp Thr Ala Met Pro Ala
 545 550 555 560

Ser Val Ile Thr Thr Gln Gly Leu Ala Val Pro Asp Thr Val Arg Gly
 565 570 575

Ala Cys Asp Arg Leu Ile Gln Leu Leu Leu His Leu Gln Lys Leu
 580 585 590

Val His His Arg Gly Gly Ser Pro Gly Glu Gly Val Leu Gly Pro Pro

Substitute Sequence Listing.ST25.txt

595

600

605

Pro Pro Pro Arg Leu Val Pro Phe Leu Asp Ala Leu Lys Asn His Val
610 615 620

Gly Glu Leu Cys Gly Glu Thr Leu Arg Leu Glu Arg Lys Arg Phe Leu
625 630 635 640

Trp Gln His Gln Leu Leu Gly Leu Leu Ser Val Tyr Thr Arg Pro Ser
645 650 655

Cys Gly Pro Glu Ala Leu Gly His Leu Leu Ser Arg Ala Arg Ser Pro
660 665 670

Glu Glu Leu Ser Leu Ala Thr Gln Leu Tyr Ala Gly Leu Val Val Ser
675 680 685

Leu Ser Gly Leu Leu Pro Leu Ala Phe Arg Ser Cys Leu Ala Arg Val
690 695 700

His Ala Gly Thr Leu Gln Pro Pro Phe Thr Ala Arg Phe Leu Arg Asn
705 710 715 720

Leu Ala Leu Leu Val Gly Trp Glu Gln Gln Gly Gly Glu Gly Pro Ala
725 730 735

Ala Leu Gly Ala His Phe Gly Glu Ser Ala Ser Ala His Leu Ser Asp
740 745 750

Leu Ala Pro Leu Leu Leu His Pro Glu Glu Glu Val Ala Glu Ala Ala
755 760 765

Ala Ser Leu Leu Ala Ile Cys Pro Phe Pro Ser Glu Ala Leu Ser Pro
770 775 780

Ser Gln Leu Leu Gly Leu Val Arg Ala Gly Val His Arg Phe Phe Ala
785 790 795 800

Ser Leu Arg Leu His Gly Pro Pro Gly Val Ala Ser Ala Cys Gln Leu
805 810 815

Leu Thr Arg Leu Ser Gln Thr Ser Pro Ala Gly Leu Lys Ala Val Leu
820 825 830

Gln Leu Leu Val Glu Gly Ala Leu His Arg Gly Asn Thr Glu Leu Phe
835 840 845

Gly Gly Gln Val Asp Gly Asp Asn Glu Thr Leu Ser Val Val Ser Ala
850 855 860

Ser Leu Ala Ser Ala Ser Leu Leu Asp Thr Asn Arg Arg His Thr Ala

Substitute Sequence Listing.ST25.txt

865 870 875 880

Ala Val Pro Gly Pro Gly Gly Ile Trp Ser Val Phe His Ala Gly Val
885 890 895

Ile Gly Arg Gly Leu Lys Pro Pro Lys Phe Val Gln Ser Arg Asn Gln
900 905 910

Gln Glu Val Ile Tyr Asn Thr Gln Ser Leu Leu Ser Leu Leu Val His
915 920 925

Cys Cys Ser Ala Pro Gly Gly Thr Glu Cys Gly Glu Cys Trp Gly Ala
930 935 940

Pro Ile Leu Ser Pro Glu Ala Ala Lys Ala Val Ala Val Thr Leu Val
945 950 955 960

Glu Ser Val Cys Pro Asp Ala Ala Gly Ala Glu Leu Ala Trp Pro Pro
965 970 975

Glu Glu His Ala Arg Ala Thr Val Glu Arg Asp Leu Arg Ile Gly Arg
980 985 990

Arg Phe Arg Glu Gln Pro Leu Leu Phe Glu Leu Leu Lys Leu Val Ala
995 1000 1005

Ala Ala Pro Pro Ala Leu Cys Tyr Cys Ser Val Leu Leu Arg Gly
1010 1015 1020

Leu Leu Ala Ala Leu Leu Gly His Trp Glu Ala Ser Arg His Pro
1025 1030 1035

Asp Thr Thr His Ser Pro Trp His Leu Glu Ala Ser Cys Thr Leu
1040 1045 1050

Val Ala Val Met Ala Glu Gly Ser Leu Leu Pro Pro Ala Leu Gly
1055 1060 1065

Asn Met His Glu Val Phe Ser Gln Leu Ala Pro Phe Glu Val Arg
1070 1075 1080

Leu Leu Leu Leu Ser Val Trp Gly Phe Leu Arg Glu His Gly Pro
1085 1090 1095

Leu Pro Gln Lys Phe Ile Phe Gln Ser Glu Arg Gly Arg Phe Ile
1100 1105 1110

Arg Asp Phe Ser Arg Glu Gly Gly Gly Glu Gly Gly Pro His Leu
1115 1120 1125

Ala Val Leu His Ser Val Leu His Arg Asn Ile Asp Arg Leu Gly

Substitute Sequence Listing.ST25.txt

1130

1135

1140

Leu Phe Ser Gly Arg Phe Gln Ala Pro Ser Pro Ser Thr Leu Leu
1145 1150 1155

Arg Gln Gly Thr
1160

<210> 4
<211> 1162
<212> PRT
<213> Artificial

<220>
<223> A variant of the human BFLP1698 polypeptide

<400> 4

Met Ala Leu Val Pro Gly Arg Ser Lys Glu Asp Gly Leu Trp Thr Arg
1 5 10 15

Asn Ser Pro Gly Ser Ser Gln His Pro Glu Ser Pro Arg Leu Pro Asn
20 25 30

Pro Leu Trp Asp Arg Gly Lys Ile Gly Lys Val Glu Gly His Gln His
35 40 45

Ile Gln Asp Phe Ser Gln Lys Ser His Leu Pro Ser Ile Val Val Glu
50 55 60

Ser Ser Glu Val Asn Glu Glu Ser Gly Asp Leu His Leu Pro His Glu
65 70 75 80

Glu Leu Leu Leu Leu Thr Asp Gly Glu Glu Glu Asp Ala Glu Ala Phe
85 90 95

Phe Gln Asp Gln Ser Glu Glu Pro Gly Ala Ala Arg Pro His His Gln
100 105 110

Ala Arg Gln Val Glu His Ser Thr Gln Arg Gly His Leu Glu Ile Arg
115 120 125

Glu Leu Lys Lys Lys Leu Phe Lys Arg Arg Arg Val Leu Asn Arg Glu
130 135 140

Arg Arg Leu Arg His Arg Val Val Gly Ala Val Ile Asp Gln Gly Leu
145 150 155 160

Ile Thr Arg His His Leu Lys Lys Arg Ala Ala Gln Glu Leu Ser Gln
165 170 175

Glu Ile Lys Ala Phe Leu Thr Gly Val Asp Pro Ile Leu Gly His Asn
180 185 190

Substitute Sequence Listing.ST25.txt

Leu Ser Ala Arg Glu His Ala Arg Cys Gly Leu Leu Leu Leu Arg Ser
 195 200 205
 Leu Pro Pro Ala Arg Ala Ala Val Leu Asp His Leu Arg Gly Val Phe
 210 215 220
 Asp Glu Ser Val Arg Ala His Leu Ala Ala Leu Asp Glu Thr Pro Val
 225 230 235 240
 Ala Gly Pro Pro His Leu Arg Pro Pro Pro Ser His Val Pro Ala
 245 250 255
 Gly Gly Pro Gly Leu Glu Asp Val Val Gln Glu Val Gln Gln Val Leu
 260 265 270
 Ser Glu Phe Ile Arg Ala Asn Pro Lys Ala Trp Ala Pro Val Ile Ser
 275 280 285
 Ala Trp Ser Ile Asp Leu Met Gly Gln Leu Ser Ser Thr Tyr Ser Gly
 290 295 300
 Gln His Gln Arg Val Pro His Ala Thr Gly Ala Leu Asn Glu Leu Leu
 305 310 315 320
 Gln Leu Trp Met Gly Cys Arg Ala Thr Arg Thr Leu Met Asp Ile Tyr
 325 330 335
 Val Gln Cys Leu Ser Ala Leu Ile Gly Ser Cys Pro Asp Ala Cys Val
 340 345 350
 Asp Ala Leu Leu Asp Thr Ser Val Gln His Ser Pro His Phe Asp Trp
 355 360 365
 Val Val Ala His Ile Gly Ser Ser Phe Pro Gly Thr Ile Ile Ser Arg
 370 375 380
 Val Leu Ser Cys Gly Leu Lys Asp Phe Cys Val His Gly Gly Ala Gly
 385 390 395 400
 Gly Gly Ala Gly Ser Ser Gly Gly Ser Ser Ser Gln Thr Pro Ser Thr
 405 410 415
 Asp Pro Phe Pro Gly Ser Pro Ala Ile Pro Ala Glu Lys Arg Val Pro
 420 425 430
 Lys Ile Ala Ser Val Val Gly Ile Leu Gly His Leu Ala Ser Arg His
 435 440 445
 Gly Asp Ser Ile Arg Arg Glu Leu Leu Arg Met Phe His Asp Ser Leu
 450 455 460

Substitute Sequence Listing.ST25.txt

Ala Gly Gly Ser Gly Gly Arg Ser Gly Asp Pro Ser Leu Gln Ala Thr
465 470 475 480

Val Pro Phe Leu Leu Gln Leu Ala Val Met Ser Pro Ala Leu Leu Gly
485 490 495

Thr Val Ser Gly Glu Leu Val Asp Cys Leu Lys Pro Pro Ala Val Leu
500 505 510

Ser Gln Leu Gln Gln His Leu Gln Gly Phe Pro Arg Glu Glu Leu Asp
515 520 525

Asn Met Leu Asn Leu Ala Val His Leu Val Ser Gln Ala Ser Gly Ala
530 535 540

Gly Ala Tyr Arg Leu Leu Gln Phe Leu Val Asp Thr Ala Met Pro Ala
545 550 555 560

Ser Val Ile Thr Thr Gln Gly Leu Ala Val Pro Asp Thr Val Arg Glu
565 570 575

Ala Cys Asp Arg Leu Ile Gln Leu Leu Leu Leu His Leu Gln Lys Leu
580 585 590

Val His His Arg Gly Gly Ser Pro Gly Glu Gly Val Leu Gly Pro Pro
595 600 605

Pro Pro Pro Arg Leu Val Pro Phe Leu Asp Ala Leu Lys Asn His Val
610 615 620

Gly Glu Leu Cys Gly Glu Thr Leu Arg Leu Glu Arg Lys Arg Phe Leu
625 630 635 640

Trp Gln His Gln Leu Leu Gly Leu Leu Ser Val Tyr Thr Arg Pro Ser
645 650 655

Cys Gly Pro Glu Ala Leu Gly His Leu Leu Ser Arg Ala Arg Ser Pro
660 665 670

Glu Glu Leu Ser Leu Ala Thr Gln Leu Tyr Ala Gly Leu Val Val Ser
675 680 685

Leu Ser Gly Leu Leu Pro Leu Ala Phe Arg Ser Cys Leu Ala Arg Val
690 695 700

His Ala Gly Thr Leu Gln Pro Pro Phe Thr Ala Arg Phe Leu Arg Asn
705 710 715 720

Leu Ala Leu Leu Val Gly Trp Glu Gln Gln Gly Gly Glu Gly Pro Ala
725 730 735

Substitute Sequence Listing.ST25.txt

Ala Leu Gly Ala His Phe Gly Glu Ser Ala Ser Ala His Leu Ser Asp
740 745 750

Leu Ala Pro Leu Leu Leu His Pro Glu Glu Glu Val Ala Glu Ala Ala
755 760 765

Ala Ser Leu Leu Ala Ile Cys Pro Phe Pro Ser Glu Ala Leu Ser Pro
770 775 780

Ser Gln Leu Leu Gly Leu Val Arg Ala Gly Val His Arg Phe Phe Ala
785 790 795 800

Ser Leu Arg Leu His Gly Pro Pro Gly Val Ala Ser Ala Cys Gln Leu
805 810 815

Leu Thr Arg Leu Ser Gln Thr Ser Pro Ala Gly Leu Lys Ala Val Leu
820 825 830

Gln Leu Leu Val Glu Gly Ala Leu His Arg Gly Asn Thr Glu Leu Phe
835 840 845

Gly Gly Gln Val Asp Gly Asp Asn Glu Thr Leu Ser Val Val Ser Ala
850 855 860

Ser Leu Ala Ser Ala Ser Leu Leu Asp Thr Asn Arg Arg His Thr Ala
865 870 875 880

Ala Val Pro Gly Pro Gly Gly Ile Trp Ser Val Phe His Ala Gly Val
885 890 895

Ile Gly Arg Gly Leu Lys Pro Pro Lys Phe Val Gln Ser Arg Asn Gln
900 905 910

Gln Glu Val Ile Tyr Asn Thr Gln Ser Leu Leu Ser Leu Leu Val His
915 920 925

Cys Cys Ser Ala Pro Gly Gly Thr Glu Cys Gly Glu Cys Trp Gly Ala
930 935 940

Pro Ile Leu Ser Pro Glu Ala Ala Lys Ala Val Ala Val Thr Leu Val
945 950 955 960

Glu Ser Val Cys Pro Asp Ala Ala Gly Ala Glu Leu Ala Trp Pro Pro
965 970 975

Glu Glu His Ala Arg Ala Thr Val Glu Arg Asp Leu Arg Ile Gly Arg
980 985 990

Arg Phe Arg Glu Gln Pro Leu Leu Phe Glu Leu Leu Lys Leu Val Ala
995 1000 1005

Substitute Sequence Listing.ST25.txt

Ala Ala Pro Pro Ala Leu Cys Tyr Cys Ser Val Leu Leu Arg Gly
1010 1015 1020

Leu Leu Ala Ala Leu Leu Gly His Trp Glu Ala Ser Arg His Pro
1025 1030 1035

Asp Thr Thr His Ser Pro Trp His Leu Glu Ala Ser Cys Thr Leu
1040 1045 1050

Val Ala Val Met Ala Glu Gly Ser Leu Leu Pro Pro Ala Leu Gly
1055 1060 1065

Asn Met His Glu Val Phe Ser Gln Leu Ala Pro Phe Glu Val Arg
1070 1075 1080

Leu Leu Leu Leu Ser Val Trp Gly Phe Leu Arg Glu His Gly Pro
1085 1090 1095

Leu Pro Gln Lys Phe Ile Phe Gln Ser Glu Arg Gly Arg Phe Ile
1100 1105 1110

Arg Asp Phe Ser Arg Glu Gly Gly Gly Glu Gly Gly Pro His Leu
1115 1120 1125

Ala Val Leu His Ser Val Leu His Arg Asn Ile Asp Arg Leu Gly
1130 1135 1140

Leu Phe Ser Gly Arg Phe Gln Ala Pro Ser Pro Ser Thr Leu Leu
1145 1150 1155

Arg Gln Gly Thr
1160

<210> 5
<211> 1162
<212> PRT
<213> Artificial

<220>
<223> A variant of the human BFLP1698 polypeptide

<400> 5

Met Ala Leu Val Pro Gly Arg Ser Lys Glu Asp Gly Leu Trp Thr Arg
1 5 10 15

Asn Ser Pro Gly Ser Ser Gln His Pro Glu Ser Pro Arg Leu Pro Asn
20 25 30

Pro Leu Trp Asp Arg Gly Lys Ile Gly Lys Val Glu Gly His Gln His
35 40 45

Ile Gln Asp Phe Ser Gln Lys Ser His Leu Pro Ser Ile Val Val Glu
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Substitute Sequence Listing.ST25.txt

50

55

60

Ser Ser Glu Val Asn Glu Glu Ser Gly Asp Leu His Leu Pro His Glu
65 70 75 80

Glu Leu Leu Leu Leu Thr Asp Gly Glu Glu Glu Asp Ala Glu Ala Phe
85 90 95

Phe Gln Asp Gln Ser Glu Glu Pro Gly Ala Ala Arg Pro His His Gln
100 105 110

Ala Arg Gln Val Glu His Ser Thr Gln Arg Gly His Leu Glu Ile Arg
115 120 125

Glu Leu Lys Lys Lys Leu Phe Lys Arg Arg Arg Val Leu Asn Arg Glu
130 135 140

Arg Arg Leu Arg His Arg Val Val Gly Ala Val Ile Asp Gln Gly Leu
145 150 155 160

Ile Thr Arg His His Leu Lys Lys Arg Ala Ala Gln Glu Leu Ser Gln
165 170 175

Glu Ile Lys Ala Phe Leu Thr Gly Val Asp Pro Ile Leu Gly His Gln
180 185 190

Leu Ser Ala Arg Glu His Ala Arg Cys Gly Leu Leu Leu Leu Arg Ser
195 200 205

Leu Pro Pro Ala Arg Ala Ala Val Leu Asp His Leu Arg Gly Val Phe
210 215 220

Asp Glu Ser Val Arg Ala His Leu Ala Ala Leu Asp Glu Thr Pro Val
225 230 235 240

Ala Gly Pro Pro His Leu Arg Pro Pro Pro Pro Ser His Val Pro Ala
245 250 255

Gly Gly Pro Gly Leu Glu Asp Val Val Gln Glu Val Gln Gln Val Leu
260 265 270

Ser Glu Phe Ile Arg Ala Asn Pro Lys Ala Trp Ala Pro Val Ile Gly
275 280 285

Ala Trp Ser Ile Asp Leu Met Gly Gln Leu Ser Ser Thr Tyr Ser Gly
290 295 300

Gln His Gln Arg Val Pro His Ala Thr Gly Ala Leu Asn Glu Leu Leu
305 310 315 320

Gln Leu Trp Met Gly Cys Arg Ala Thr Arg Thr Leu Met Asp Ile Tyr

Substitute Sequence Listing.ST25.txt

325

330

335

Val Gln Cys Leu Ser Ala Leu Ile Gly Ser Cys Pro Asp Ala Cys Val
 340 345 350

Asp Ala Leu Leu Asp Thr Ser Val Gln His Ser Pro His Phe Asp Trp
 355 360 365

Val Val Ala His Ile Gly Ser Ser Phe Pro Gly Thr Ile Ile Ser Arg
 370 375 380

Val Leu Ser Cys Gly Leu Lys Asp Phe Cys Val His Gly Gly Ala Gly
 385 390 395 400

Gly Gly Ala Gly Ser Ser Gly Gly Ser Ser Ser Gln Thr Pro Ser Thr
 405 410 415

Asp Pro Phe Pro Gly Ser Pro Ala Ile Pro Ala Glu Lys Arg Val Pro
 420 425 430

Lys Ile Ala Ser Val Val Gly Ile Leu Gly His Leu Ala Ser Arg His
 435 440 445

Gly Asp Ser Ile Arg Arg Glu Leu Leu Arg Met Phe His Asp Ser Leu
 450 455 460

Ala Gly Gly Ser Gly Gly Arg Ser Gly Asp Pro Ser Leu Gln Ala Thr
 465 470 475 480

Val Pro Phe Leu Leu Gln Leu Ala Val Met Ser Pro Ala Leu Leu Gly
 485 490 495

Thr Val Ser Gly Glu Leu Val Asp Cys Leu Lys Pro Pro Ala Val Leu
 500 505 510

Ser Gln Leu Gln Gln His Leu Gln Gly Phe Pro Arg Glu Glu Leu Asp
 515 520 525

Asn Met Leu Asn Leu Ala Val His Leu Val Ser Gln Ala Ser Gly Ala
 530 535 540

Gly Ala Tyr Arg Leu Leu Gln Phe Leu Val Asp Thr Ala Met Pro Ala
 545 550 555 560

Ser Val Ile Thr Thr Gln Gly Leu Ala Val Pro Asp Thr Val Arg Glu
 565 570 575

Ala Cys Asp Arg Leu Ile Gln Leu Leu Leu His Leu Gln Lys Leu
 580 585 590

Val His His Arg Gly Gly Ser Pro Gly Glu Gly Val Leu Gly Pro Pro

Substitute Sequence Listing.ST25.txt

595

600

605

Pro Pro Pro Arg Leu Val Pro Phe Leu Asp Ala Leu Lys Asn His Val
610 615 620
Gly Glu Leu Cys Gly Glu Thr Leu Arg Leu Glu Arg Lys Arg Phe Leu
625 630 635 640
Trp Gln His Gln Leu Leu Gly Leu Leu Ser Val Tyr Thr Arg Pro Ser
645 650 655
Cys Gly Pro Glu Ala Leu Gly His Leu Leu Ser Arg Ala Arg Ser Pro
660 665 670
Glu Glu Leu Ser Leu Ala Thr Gln Leu Tyr Ala Gly Leu Val Val Ser
675 680 685
Leu Ser Gly Leu Leu Pro Leu Ala Phe Arg Ser Cys Leu Ala Arg Val
690 695 700
His Ala Gly Thr Leu Gln Pro Pro Phe Thr Ala Arg Phe Leu Arg Asn
705 710 715 720
Leu Ala Leu Leu Val Gly Trp Glu Gln Gln Gly Gly Glu Gly Pro Ala
725 730 735
Ala Leu Gly Ala His Phe Gly Glu Ser Ala Ser Ala His Leu Ser Asp
740 745 750
Leu Ala Pro Leu Leu Leu His Pro Glu Glu Glu Val Ala Glu Ala Ala
755 760 765
Ala Ser Leu Leu Ala Ile Cys Pro Phe Pro Ser Glu Ala Leu Ser Pro
770 775 780
Ser Gln Leu Leu Gly Leu Val Arg Ala Gly Val His Arg Phe Phe Ala
785 790 795 800
Ser Leu Arg Leu His Gly Pro Pro Gly Val Ala Ser Ala Cys Gln Leu
805 810 815
Leu Thr Arg Leu Ser Gln Thr Ser Pro Ala Gly Leu Lys Ala Val Leu
820 825 830
Gln Leu Leu Val Glu Gly Ala Leu His Arg Gly Asn Thr Glu Leu Phe
835 840 845
Gly Gly Gln Val Asp Gly Asp Asn Glu Thr Leu Ser Val Val Ser Ala
850 855 860
Ser Leu Ala Ser Ala Ser Leu Leu Asp Thr Asn Arg Arg His Thr Ala

Substitute Sequence Listing.ST25.txt

865 870 875 880

Ala Val Pro Gly Pro Gly Gly Ile Trp Ser Val Phe His Ala Gly Val
 885 890 895

Ile Gly Arg Gly Leu Lys Pro Pro Lys Phe Val Gln Ser Arg Asn Gln
 900 905 910

Gln Glu Val Ile Tyr Asn Thr Gln Ser Leu Leu Ser Leu Leu Val His
 915 920 925

Cys Cys Ser Ala Pro Gly Gly Thr Glu Cys Gly Glu Cys Trp Gly Ala
 930 935 940

Pro Ile Leu Ser Pro Glu Ala Ala Lys Ala Val Ala Val Thr Leu Val
945 950 955 960

Glu Ser Val Cys Pro Asp Ala Ala Gly Ala Glu Leu Ala Trp Pro Pro
 965 970

Glu Glu His Ala Arg Ala Thr Val Glu Arg Asp Leu Arg Ile Gly Arg
 980 985 990

Arg Phe Arg Glu Gln Pro Leu Leu Phe Glu Leu Leu Lys Leu Val Ala
 995 1000 1005

Ala Ala Pro Pro Ala Leu Cys Tyr Cys Ser Val Leu Leu Arg Gly
1010 1015 1020

Leu Leu Ala Ala Leu Leu Gly His Trp Glu Ala Ser Arg His Pro
1025 1030 1035

Asp Thr Thr His Ser Pro Trp His Leu Glu Ala Ser Cys Thr Leu
1040 1045 1050

Val Ala Val Met Ala Glu Gly Ser Leu Leu Pro Pro Ala Leu Gly
1055 1060 1065

Asn Met His Glu Val Phe Ser Gln Leu Ala Pro Phe Glu Val Arg
1070 1075 1080

Leu Leu Leu Leu Ser Val Trp Gly Phe Leu Arg Glu His Gly Pro
1085 1090 1095

Leu Pro Gln Lys Phe Ile Phe Gln Ser Glu Arg Gly Arg Phe Ile
1100 1105 1110

Arg Asp Phe Ser Arg Glu Gly Gly Gly Glu Gly Gly Pro His Leu
1115 1120 1125

Ala Val Leu His Ser Val Leu His Arg Asn Ile Asp Arg Leu Gly

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Substitute Sequence Listing.ST25.txt

1130

1135

1140

Leu Phe Ser Gly Arg Phe Gln Ala Pro Ser Pro Ser Thr Leu Leu
1145 1150 1155

Arg Gln Gly Thr
1160

<210> 6
<211> 1162
<212> PRT
<213> Artificial

<220>
<223> A variant of the human BFLP1698 polypeptide

<400> 6

Met Ala Leu Val Pro Gly Arg Ser Lys Glu Asp Gly Leu Trp Thr Arg
1 5 10 15

Asn Ser Pro Gly Ser Ser Gln His Pro Glu Ser Pro Arg Leu Pro Asn
20 25 30

Pro Leu Trp Asp Arg Gly Lys Ile Gly Lys Val Glu Gly His Gln His
35 40 45

Ile Gln Asp Phe Ser Gln Lys Ser His Leu Pro Ser Ile Val Val Glu
50 55 60

Ser Ser Glu Val Asn Glu Glu Ser Gly Asp Leu His Leu Pro His Glu
65 70 75 80

Glu Leu Leu Leu Leu Thr Asp Gly Glu Glu Glu Asp Ala Glu Ala Phe
85 90 95

Phe Gln Asp Gln Ser Glu Glu Pro Gly Ala Ala Arg Pro His His Gln
100 105 110

Ala Arg Gln Val Glu His Ser Thr Gln Arg Gly His Leu Glu Ile Arg
115 120 125

Glu Leu Lys Lys Lys Leu Phe Lys Arg Arg Arg Val Leu Asn Arg Glu
130 135 140

Arg Arg Leu Arg His Arg Val Val Gly Ala Val Ile Asp Gln Gly Leu
145 150 155 160

Ile Thr Arg His His Leu Lys Lys Arg Ala Ala Gln Glu Leu Ser Gln
165 170 175

Glu Ile Lys Ala Phe Leu Thr Gly Val Asp Pro Ile Leu Gly His Gln
180 185 190

Substitute Sequence Listing.ST25.txt

Leu Ser Ala Arg Glu His Ala Arg Cys Gly Leu Leu Leu Leu Arg Ser
 195 200 205
 Leu Pro Pro Ala Arg Ala Ala Val Leu Asp His Leu Arg Gly Val Phe
 210 215 220
 Asp Glu Ser Val Arg Ala His Leu Ala Ala Leu Asp Glu Thr Pro Val
 225 230 235 240
 Ala Gly Pro Pro His Leu Arg Pro Pro Pro Pro Ser His Val Pro Ala
 245 250 255
 Gly Gly Pro Gly Leu Glu Asp Val Val Gln Glu Val Gln Gln Val Leu
 260 265 270
 Ser Glu Phe Ile Arg Ala Asn Pro Lys Ala Trp Ala Pro Val Ile Ser
 275 280 285
 Ala Trp Ser Ile Asp Leu Met Gly Gln Leu Ser Ser Thr Tyr Ser Gly
 290 295 300
 Gln His Gln Arg Val Pro His Ala Thr Gly Ala Leu Asn Glu Leu Leu
 305 310 315 320
 Gln Leu Trp Met Gly Cys Arg Ala Thr Arg Thr Leu Met Asp Ile Tyr
 325 330 335
 Val Gln Cys Leu Ser Ala Leu Ile Gly Ser Cys Pro Asp Ala Cys Val
 340 345 350
 Asp Ala Leu Leu Asp Thr Ser Val Gln His Ser Pro Arg Phe Asp Trp
 355 360 365
 Val Val Ala His Ile Gly Ser Ser Phe Pro Gly Thr Ile Ile Ser Arg
 370 375 380
 Val Leu Ser Cys Gly Leu Lys Asp Phe Cys Val His Gly Gly Ala Gly
 385 390 395 400
 Gly Gly Ala Gly Ser Ser Gly Gly Ser Ser Ser Gln Thr Pro Ser Thr
 405 410 415
 Asp Pro Phe Pro Gly Ser Pro Ala Ile Pro Ala Glu Lys Arg Val Pro
 420 425 430
 Lys Ile Ala Ser Val Val Gly Ile Leu Gly His Leu Ala Ser Arg His
 435 440 445
 Gly Asp Ser Ile Arg Arg Glu Leu Leu Arg Met Phe His Asp Ser Leu
 450 455 460

Substitute Sequence Listing.ST25.txt

Ala Gly Gly Ser Gly Gly Arg Ser Gly Asp Pro Ser Leu Gln Ala Thr
465 470 475 480

Val Pro Phe Leu Leu Gln Leu Ala Val Met Ser Pro Ala Leu Leu Gly
485 490 495

Thr Val Ser Gly Glu Leu Val Asp Cys Leu Lys Pro Pro Ala Val Leu
500 505 510

Ser Gln Leu Gln Gln His Leu Gln Gly Phe Pro Arg Glu Glu Leu Asp
515 520 525

Asn Met Leu Asn Leu Ala Val His Leu Val Ser Gln Ala Ser Gly Ala
530 535 540

Gly Ala Tyr Arg Leu Leu Gln Phe Leu Val Asp Thr Ala Met Pro Ala
545 550 555 560

Ser Val Ile Thr Thr Gln Gly Leu Ala Val Pro Asp Thr Val Arg Glu
565 570 575

Ala Cys Asp Arg Leu Ile Gln Leu Leu Leu Leu His Leu Gln Lys Leu
580 585 590

Val His His Arg Gly Gly Ser Pro Gly Glu Gly Val Leu Gly Pro Pro
595 600 605

Pro Pro Pro Arg Leu Val Pro Phe Leu Asp Ala Leu Lys Asn His Val
610 615 620

Gly Glu Leu Cys Gly Glu Thr Leu Arg Leu Glu Arg Lys Arg Phe Leu
625 630 635 640

Trp Gln His Gln Leu Leu Gly Leu Leu Ser Val Tyr Thr Arg Pro Ser
645 650 655

Cys Gly Pro Glu Ala Leu Gly His Leu Leu Ser Arg Ala Arg Ser Pro
660 665 670

Glu Glu Leu Ser Leu Ala Thr Gln Leu Tyr Ala Gly Leu Val Val Ser
675 680 685

Leu Ser Gly Leu Leu Pro Leu Ala Phe Arg Ser Cys Leu Ala Arg Val
690 695 700

His Ala Gly Thr Leu Gln Pro Pro Phe Thr Ala Arg Phe Leu Arg Asn
705 710 715 720

Leu Ala Leu Leu Val Gly Trp Glu Gln Gln Gly Gly Glu Gly Pro Ala
725 730 735

Substitute Sequence Listing.ST25.txt

Ala Leu Gly Ala His Phe Gly Glu Ser Ala Ser Ala His Leu Ser Asp
740 745 750

Leu Ala Pro Leu Leu Leu His Pro Glu Glu Glu Val Ala Glu Ala Ala
755 760 765

Ala Ser Leu Leu Ala Ile Cys Pro Phe Pro Ser Glu Ala Leu Ser Pro
770 775 780

Ser Gln Leu Leu Gly Leu Val Arg Ala Gly Val His Arg Phe Phe Ala
785 790 795 800

Ser Leu Arg Leu His Gly Pro Pro Gly Val Ala Ser Ala Cys Gln Leu
805 810 815

Leu Thr Arg Leu Ser Gln Thr Ser Pro Ala Gly Leu Lys Ala Val Leu
820 825 830

Gln Leu Leu Val Glu Gly Ala Leu His Arg Gly Asn Thr Glu Leu Phe
835 840 845

Gly Gly Gln Val Asp Gly Asp Asn Glu Thr Leu Ser Val Val Ser Ala
850 855 860

Ser Leu Ala Ser Ala Ser Leu Leu Asp Thr Asn Arg Arg His Thr Ala
865 870 875 880

Ala Val Pro Gly Pro Gly Gly Ile Trp Ser Val Phe His Ala Gly Val
885 890 895

Ile Gly Arg Gly Leu Lys Pro Pro Lys Phe Val Gln Ser Arg Asn Gln
900 905 910

Gln Glu Val Ile Tyr Asn Thr Gln Ser Leu Leu Ser Leu Leu Val His
915 920 925

Cys Cys Ser Ala Pro Gly Gly Thr Glu Cys Gly Glu Cys Trp Gly Ala
930 935 940

Pro Ile Leu Ser Pro Glu Ala Ala Lys Ala Val Ala Val Thr Leu Val
945 950 955 960

Glu Ser Val Cys Pro Asp Ala Ala Gly Ala Glu Leu Ala Trp Pro Pro
965 970 975

Glu Glu His Ala Arg Ala Thr Val Glu Arg Asp Leu Arg Ile Gly Arg
980 985 990

Arg Phe Arg Glu Gln Pro Leu Leu Phe Glu Leu Leu Lys Leu Val Ala
995 1000 1005

Substitute Sequence Listing.ST25.txt

Ala Ala Pro Pro Ala Leu Cys Tyr Cys Ser Val Leu Leu Arg Gly
1010 1015 1020

Leu Leu Ala Ala Leu Leu Gly His Trp Glu Ala Ser Arg His Pro
1025 1030 1035

Asp Thr Thr His Ser Pro Trp His Leu Glu Ala Ser Cys Thr Leu
1040 1045 1050

Val Ala Val Met Ala Glu Gly Ser Leu Leu Pro Pro Ala Leu Gly
1055 1060 1065

Asn Met His Glu Val Phe Ser Gln Leu Ala Pro Phe Glu Val Arg
1070 1075 1080

Leu Leu Leu Leu Ser Val Trp Gly Phe Leu Arg Glu His Gly Pro
1085 1090 1095

Leu Pro Gln Lys Phe Ile Phe Gln Ser Glu Arg Gly Arg Phe Ile
1100 1105 1110

Arg Asp Phe Ser Arg Glu Gly Gly Gly Glu Gly Gly Pro His Leu
1115 1120 1125

Ala Val Leu His Ser Val Leu His Arg Asn Ile Asp Arg Leu Gly
1130 1135 1140

Leu Phe Ser Gly Arg Phe Gln Ala Pro Ser Pro Ser Thr Leu Leu
1145 1150 1155

Arg Gln Gly Thr
1160

<210> 7
<211> 1162
<212> PRT
<213> Artificial

<220>
<223> A variant of the human BFLP1698 polypeptide

<400> 7

Met Ala Leu Val Pro Gly Arg Ser Lys Glu Asp Gly Leu Trp Thr Arg
1 5 10 15

Asn Ser Pro Gly Ser Ser Gln His Pro Glu Ser Pro Arg Leu Pro Asn
20 25 30

Pro Leu Trp Asp Arg Gly Lys Ile Gly Lys Val Glu Gly His Gln His
35 40 45

Ile Gln Asp Phe Ser Gln Lys Ser His Leu Pro Ser Ile Val Val Glu
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Substitute Sequence Listing.ST25.txt

50

55

60

Ser Ser Glu Val Asn Glu Glu Ser Gly Asp Leu His Leu Pro His Glu
65 70 75 80

Glu Leu Leu Leu Leu Thr Asp Gly Glu Glu Glu Asp Ala Glu Ala Phe
85 90 95

Phe Gln Asp Gln Ser Glu Glu Pro Gly Ala Ala Arg Pro His His Gln
100 105 110

Ala Arg Gln Val Glu His Ser Thr Gln Arg Gly His Leu Glu Ile Arg
115 120 125

Glu Leu Lys Lys Lys Leu Phe Lys Arg Arg Arg Val Leu Asn Arg Glu
130 135 140

Arg Arg Leu Arg His Arg Val Val Gly Ala Val Ile Asp Gln Gly Leu
145 150 155 160

Ile Thr Arg His His Leu Lys Lys Arg Ala Ala Gln Glu Leu Ser Gln
165 170 175

Glu Ile Lys Ala Phe Leu Thr Gly Val Asp Pro Ile Leu Gly His Gln
180 185 190

Leu Ser Ala Arg Glu His Ala Arg Cys Gly Leu Leu Leu Leu Arg Ser
195 200 205

Leu Pro Pro Ala Arg Ala Ala Val Leu Asp His Leu Arg Gly Val Phe
210 215 220

Asp Glu Ser Val Arg Ala His Leu Ala Ala Leu Asp Glu Thr Pro Val
225 230 235 240

Ala Gly Pro Pro His Leu Arg Pro Pro Pro Pro Ser His Val Pro Ala
245 250 255

Gly Gly Pro Gly Leu Glu Asp Val Val Gln Glu Val Gln Gln Val Leu
260 265 270

Ser Glu Phe Ile Arg Ala Asn Pro Lys Ala Trp Ala Pro Val Ile Ser
275 280 285

Ala Trp Ser Ile Asp Leu Met Gly Gln Leu Ser Ser Thr Tyr Ser Gly
290 295 300

Gln His Gln Arg Val Pro His Ala Thr Gly Ala Leu Asn Glu Leu Leu
305 310 315 320

Gln Leu Trp Met Gly Cys Arg Ala Thr Arg Thr Leu Met Asp Ile Tyr
Page 26

Substitute Sequence Listing.ST25.txt
325 330 335

Val Gln Cys Leu Ser Ala Leu Ile Gly Ser Cys Pro Asp Ala Cys Val
340 345 350

Asp Ala Leu Leu Asp Thr Ser Val Gln His Ser Pro His Phe Asp Trp
355 360 365

Val Val Ala His Ile Gly Ser Ser Phe Pro Gly Thr Ile Ile Ser Arg
370 375 380

Val Leu Ser Cys Gly Leu Lys Asp Phe Cys Val His Gly Gly Ala Gly
385 390 395 400

Gly Gly Ala Gly Ser Ser Gly Gly Ser Ser Ser Gln Thr Pro Ser Thr
405 410 415

Asp Pro Phe Pro Gly Ser Pro Ala Ile Pro Ala Glu Lys Arg Val Pro
420 425 430

Lys Ile Ala Ser Val Val Gly Ile Leu Gly His Leu Ala Ser Arg His
435 440 445

Gly Asp Ser Ile Arg Arg Glu Leu Leu Arg Met Phe His Asp Ser Leu
450 455 460

Ala Gly Gly Ser Gly Gly Arg Ser Gly Asp Pro Ser Leu Gln Ala Thr
465 470 475 480

Met Pro Phe Leu Leu Gln Leu Ala Val Met Ser Pro Ala Leu Leu Gly
485 490 495

Thr Val Ser Gly Glu Leu Val Asp Cys Leu Lys Pro Pro Ala Val Leu
500 505 510

Ser Gln Leu Gln Gln His Leu Gln Gly Phe Pro Arg Glu Glu Leu Asp
515 520 525

Asn Met Leu Asn Leu Ala Val His Leu Val Ser Gln Ala Ser Gly Ala
530 535 540

Gly Ala Tyr Arg Leu Leu Gln Phe Leu Val Asp Thr Ala Met Pro Ala
545 550 555 560

Ser Val Ile Thr Thr Gln Gly Leu Ala Val Pro Asp Thr Val Arg Glu
565 570 575

Ala Cys Asp Arg Leu Ile Gln Leu Leu Leu His Leu Gln Lys Leu
580 585 590

Val His His Arg Gly Gly Ser Pro Gly Glu Gly Val Leu Gly Pro Pro
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Substitute Sequence Listing.ST25.txt

595

600

605

Pro	Pro	Pro	Arg	Leu	Val	Pro	Phe	Leu	Asp	Ala	Leu	Lys	Asn	His	Val
610						615					620				
Gly	Glu	Leu	Cys	Gly	Glu	Thr	Leu	Arg	Leu	Glu	Arg	Lys	Arg	Phe	Leu
625					630					635					640
Trp	Gln	His	Gln	Leu	Leu	Gly	Leu	Leu	Ser	Val	Tyr	Thr	Arg	Pro	Ser
				645					650					655	
Cys	Gly	Pro	Glu	Ala	Leu	Gly	His	Leu	Leu	Ser	Arg	Ala	Arg	Ser	Pro
			660					665					670		
Glu	Glu	Leu	Ser	Leu	Ala	Thr	Gln	Leu	Tyr	Ala	Gly	Leu	Val	Val	Ser
		675					680					685			
Leu	Ser	Gly	Leu	Leu	Pro	Leu	Ala	Phe	Arg	Ser	Cys	Leu	Ala	Arg	Val
	690					695					700				
His	Ala	Gly	Thr	Leu	Gln	Pro	Pro	Phe	Thr	Ala	Arg	Phe	Leu	Arg	Asn
705					710					715					720
Leu	Ala	Leu	Leu	Val	Gly	Trp	Glu	Gln	Gln	Gly	Gly	Glu	Gly	Pro	Ala
				725					730					735	
Ala	Leu	Gly	Ala	His	Phe	Gly	Glu	Ser	Ala	Ser	Ala	His	Leu	Ser	Asp
			740					745					750		
Leu	Ala	Pro	Leu	Leu	Leu	His	Pro	Glu	Glu	Glu	Val	Ala	Glu	Ala	Ala
		755					760					765			
Ala	Ser	Leu	Leu	Ala	Ile	Cys	Pro	Phe	Pro	Ser	Glu	Ala	Leu	Ser	Pro
	770					775					780				
Ser	Gln	Leu	Leu	Gly	Leu	Val	Arg	Ala	Gly	Val	His	Arg	Phe	Phe	Ala
785					790					795					800
Ser	Leu	Arg	Leu	His	Gly	Pro	Pro	Gly	Val	Ala	Ser	Ala	Cys	Gln	Leu
				805					810					815	
Leu	Thr	Arg	Leu	Ser	Gln	Thr	Ser	Pro	Ala	Gly	Leu	Lys	Ala	Val	Leu
			820					825					830		
Gln	Leu	Leu	Val	Glu	Gly	Ala	Leu	His	Arg	Gly	Asn	Thr	Glu	Leu	Phe
		835					840					845			
Gly	Gly	Gln	Val	Asp	Gly	Asp	Asn	Glu	Thr	Leu	Ser	Val	Val	Ser	Ala
	850					855					860				
Ser	Leu	Ala	Ser	Ala	Ser	Leu	Leu	Asp	Thr	Asn	Arg	Arg	His	Thr	Ala

Substitute Sequence Listing.ST25.txt

865

870

875

880

Ala Val Pro Gly Pro Gly Gly Ile Trp Ser Val Phe His Ala Gly Val
885 890 895

Ile Gly Arg Gly Leu Lys Pro Pro Lys Phe Val Gln Ser Arg Asn Gln
900 905 910

Gln Glu Val Ile Tyr Asn Thr Gln Ser Leu Leu Ser Leu Leu Val His
915 920 925

Cys Cys Ser Ala Pro Gly Gly Thr Glu Cys Gly Glu Cys Trp Gly Ala
930 935 940

Pro Ile Leu Ser Pro Glu Ala Ala Lys Ala Val Ala Val Thr Leu Val
945 950 955 960

Glu Ser Val Cys Pro Asp Ala Ala Gly Ala Glu Leu Ala Trp Pro Pro
965 970 975

Glu Glu His Ala Arg Ala Thr Val Glu Arg Asp Leu Arg Ile Gly Arg
980 985 990

Arg Phe Arg Glu Gln Pro Leu Leu Phe Glu Leu Leu Lys Leu Val Ala
995 1000 1005

Ala Ala Pro Pro Ala Leu Cys Tyr Cys Ser Val Leu Leu Arg Gly
1010 1015 1020

Leu Leu Ala Ala Leu Leu Gly His Trp Glu Ala Ser Arg His Pro
1025 1030 1035

Asp Thr Thr His Ser Pro Trp His Leu Glu Ala Ser Cys Thr Leu
1040 1045 1050

Val Ala Val Met Ala Glu Gly Ser Leu Leu Pro Pro Ala Leu Gly
1055 1060 1065

Asn Met His Glu Val Phe Ser Gln Leu Ala Pro Phe Glu Val Arg
1070 1075 1080

Leu Leu Leu Leu Ser Val Trp Gly Phe Leu Arg Glu His Gly Pro
1085 1090 1095

Leu Pro Gln Lys Phe Ile Phe Gln Ser Glu Arg Gly Arg Phe Ile
1100 1105 1110

Arg Asp Phe Ser Arg Glu Gly Gly Gly Glu Gly Gly Pro His Leu
1115 1120 1125

Ala Val Leu His Ser Val Leu His Arg Asn Ile Asp Arg Leu Gly

Substitute Sequence Listing.ST25.txt

1130

1135

1140

Leu Phe Ser Gly Arg Phe Gln Ala Pro Ser Pro Ser Thr Leu Leu
1145 1150 1155

Arg Gln Gly Thr
1160

<210> 8
<211> 1162
<212> PRT
<213> Artificial

<220>
<223> A variant of the human BFLP1698 polypeptide

<400> 8

Met Ala Leu Val Pro Gly Arg Ser Lys Glu Asp Gly Leu Trp Thr Arg
1 5 10 15

Asn Ser Pro Gly Ser Ser Gln His Pro Glu Ser Pro Arg Leu Pro Asn
20 25 30

Pro Leu Trp Asp Arg Gly Lys Ile Gly Lys Val Glu Gly His Gln His
35 40 45

Ile Gln Asp Phe Ser Gln Lys Ser His Leu Pro Ser Ile Val Val Glu
50 55 60

Ser Ser Glu Val Asn Glu Glu Ser Gly Asp Leu His Leu Pro His Glu
65 70 75 80

Glu Leu Leu Leu Leu Thr Asp Gly Glu Glu Glu Asp Ala Glu Ala Phe
85 90 95

Phe Gln Asp Gln Ser Glu Glu Pro Gly Ala Ala Arg Pro His His Gln
100 105 110

Ala Arg Gln Val Glu His Ser Thr Gln Arg Gly His Leu Glu Ile Arg
115 120 125

Glu Leu Lys Lys Lys Leu Phe Lys Arg Arg Arg Val Leu Asn Arg Glu
130 135 140

Arg Arg Leu Arg His Arg Val Val Gly Ala Val Ile Asp Gln Gly Leu
145 150 155 160

Ile Thr Arg His His Leu Lys Lys Arg Ala Ala Gln Glu Leu Ser Gln
165 170 175

Glu Ile Lys Ala Phe Leu Thr Gly Val Asp Pro Ile Leu Gly His Gln
180 185 190

Substitute Sequence Listing.ST25.txt

Leu Ser Ala Arg Glu His Ala Arg Cys Gly Leu Leu Leu Leu Arg Ser
195 200 205

Leu Pro Pro Ala Arg Ala Ala Val Leu Asp His Leu Arg Gly Val Phe
210 215 220

Asp Glu Ser Val Arg Ala His Leu Ala Ala Leu Asp Glu Thr Pro Val
225 230 235 240

Ala Gly Pro Pro His Leu Arg Pro Pro Pro Pro Ser His Val Pro Ala
245 250 255

Gly Gly Pro Gly Leu Glu Asp Val Val Gln Glu Val Gln Gln Val Leu
260 265 270

Ser Glu Phe Ile Arg Ala Asn Pro Lys Ala Trp Ala Pro Val Ile Ser
275 280 285

Ala Trp Ser Ile Asp Leu Met Gly Gln Leu Ser Ser Thr Tyr Ser Gly
290 295 300

Gln His Gln Arg Val Pro His Ala Thr Gly Ala Leu Asn Glu Leu Leu
305 310 315 320

Gln Leu Trp Met Gly Cys Arg Ala Thr Arg Thr Leu Met Asp Ile Tyr
325 330 335

Val Gln Cys Leu Ser Ala Leu Ile Gly Ser Cys Pro Asp Ala Cys Val
340 345 350

Asp Ala Leu Leu Asp Thr Ser Val Gln His Ser Pro His Phe Asp Trp
355 360 365

Val Val Ala His Ile Gly Ser Ser Phe Pro Gly Thr Ile Ile Ser Arg
370 375 380

Val Leu Ser Cys Gly Leu Lys Asp Phe Cys Val His Gly Gly Ala Gly
385 390 395 400

Gly Gly Ala Gly Ser Ser Gly Gly Ser Ser Ser Gln Thr Pro Ser Thr
405 410 415

Asp Pro Phe Pro Gly Ser Pro Ala Ile Pro Ala Glu Lys Arg Val Pro
420 425 430

Lys Ile Ala Ser Val Val Gly Ile Leu Gly His Leu Ala Ser Arg His
435 440 445

Gly Asp Ser Ile Arg Arg Glu Leu Leu Arg Met Phe His Asp Ser Leu
450 455 460

Substitute Sequence Listing.ST25.txt

Ala Gly Gly Ser Gly Gly Arg Ser Gly Asp Pro Ser Leu Gln Ala Thr
465 470 475 480

Val Pro Phe Leu Leu Gln Leu Ala Val Met Ser Pro Ala Leu Leu Gly
485 490 495

Thr Val Ser Gly Glu Leu Val Asp Cys Leu Lys Pro Pro Ala Val Leu
500 505 510

Ser Gln Leu Gln Gln His Leu Gln Gly Phe Pro Arg Glu Glu Leu Asp
515 520 525

Asn Met Leu Asn Leu Ala Val His Leu Val Ser Gln Ala Ser Gly Ala
530 535 540

Gly Ala Tyr Arg Leu Leu Gln Phe Leu Val Asp Tyr Ala Met Pro Ala
545 550 555 560

Ser Val Ile Thr Thr Gln Gly Leu Ala Val Pro Asp Thr Val Arg Glu
565 570 575

Ala Cys Asp Arg Leu Ile Gln Leu Leu Leu Leu His Leu Gln Lys Leu
580 585 590

Val His His Arg Gly Gly Ser Pro Gly Glu Gly Val Leu Gly Pro Pro
595 600 605

Pro Pro Pro Arg Leu Val Pro Phe Leu Asp Ala Leu Lys Asn His Val
610 615 620

Gly Glu Leu Cys Gly Glu Thr Leu Arg Leu Glu Arg Lys Arg Phe Leu
625 630 635 640

Trp Gln His Gln Leu Leu Gly Leu Leu Ser Val Tyr Thr Arg Pro Ser
645 650 655

Cys Gly Pro Glu Ala Leu Gly His Leu Leu Ser Arg Ala Arg Ser Pro
660 665 670

Glu Glu Leu Ser Leu Ala Thr Gln Leu Tyr Ala Gly Leu Val Val Ser
675 680 685

Leu Ser Gly Leu Leu Pro Leu Ala Phe Arg Ser Cys Leu Ala Arg Val
690 695 700

His Ala Gly Thr Leu Gln Pro Pro Phe Thr Ala Arg Phe Leu Arg Asn
705 710 715 720

Leu Ala Leu Leu Val Gly Trp Glu Gln Gln Gly Gly Glu Gly Pro Ala
725 730 735

Substitute Sequence Listing.ST25.txt

Ala Leu Gly Ala His Phe Gly Glu Ser Ala Ser Ala His Leu Ser Asp
740 745 750

Leu Ala Pro Leu Leu Leu His Pro Glu Glu Glu Val Ala Glu Ala Ala
755 760 765

Ala Ser Leu Leu Ala Ile Cys Pro Phe Pro Ser Glu Ala Leu Ser Pro
770 775 780

Ser Gln Leu Leu Gly Leu Val Arg Ala Gly Val His Arg Phe Phe Ala
785 790 795 800

Ser Leu Arg Leu His Gly Pro Pro Gly Val Ala Ser Ala Cys Gln Leu
805 810 815

Leu Thr Arg Leu Ser Gln Thr Ser Pro Ala Gly Leu Lys Ala Val Leu
820 825 830

Gln Leu Leu Val Glu Gly Ala Leu His Arg Gly Asn Thr Glu Leu Phe
835 840 845

Gly Gly Gln Val Asp Gly Asp Asn Glu Thr Leu Ser Val Val Ser Ala
850 855 860

Ser Leu Ala Ser Ala Ser Leu Leu Asp Thr Asn Arg Arg His Thr Ala
865 870 875 880

Ala Val Pro Gly Pro Gly Gly Ile Trp Ser Val Phe His Ala Gly Val
885 890 895

Ile Gly Arg Gly Leu Lys Pro Pro Lys Phe Val Gln Ser Arg Asn Gln
900 905 910

Gln Glu Val Ile Tyr Asn Thr Gln Ser Leu Leu Ser Leu Leu Val His
915 920 925

Cys Cys Ser Ala Pro Gly Gly Thr Glu Cys Gly Glu Cys Trp Gly Ala
930 935 940

Pro Ile Leu Ser Pro Glu Ala Ala Lys Ala Val Ala Val Thr Leu Val
945 950 955 960

Glu Ser Val Cys Pro Asp Ala Ala Gly Ala Glu Leu Ala Trp Pro Pro
965 970 975

Glu Glu His Ala Arg Ala Thr Val Glu Arg Asp Leu Arg Ile Gly Arg
980 985 990

Arg Phe Arg Glu Gln Pro Leu Leu Phe Glu Leu Leu Lys Leu Val Ala
995 1000 1005

Substitute Sequence Listing.ST25.txt

Ala Ala Pro Pro Ala Leu Cys Tyr Cys Ser Val Leu Leu Arg Gly
1010 1015 1020

Leu Leu Ala Ala Leu Leu Gly His Trp Glu Ala Ser Arg His Pro
1025 1030 1035

Asp Thr Thr His Ser Pro Trp His Leu Glu Ala Ser Cys Thr Leu
1040 1045 1050

Val Ala Val Met Ala Glu Gly Ser Leu Leu Pro Pro Ala Leu Gly
1055 1060 1065

Asn Met His Glu Val Phe Ser Gln Leu Ala Pro Phe Glu Val Arg
1070 1075 1080

Leu Leu Leu Leu Ser Val Trp Gly Phe Leu Arg Glu His Gly Pro
1085 1090 1095

Leu Pro Gln Lys Phe Ile Phe Gln Ser Glu Arg Gly Arg Phe Ile
1100 1105 1110

Arg Asp Phe Ser Arg Glu Gly Gly Gly Glu Gly Gly Pro His Leu
1115 1120 1125

Ala Val Leu His Ser Val Leu His Arg Asn Ile Asp Arg Leu Gly
1130 1135 1140

Leu Phe Ser Gly Arg Phe Gln Ala Pro Ser Pro Ser Thr Leu Leu
1145 1150 1155

Arg Gln Gly Thr
1160

<210> 9
<211> 1162
<212> PRT
<213> Artificial

<220>
<223> A variant of the human BFLP1698 polypeptide

<400> 9

Met Ala Leu Val Pro Gly Arg Ser Lys Glu Asp Gly Leu Trp Thr Arg
1 5 10 15

Asn Ser Pro Gly Ser Ser Gln His Pro Glu Ser Pro Arg Leu Pro Asn
20 25 30

Pro Leu Trp Asp Arg Gly Lys Ile Gly Lys Val Glu Gly His Gln His
35 40 45

Ile Gln Asp Phe Ser Gln Lys Ser His Leu Pro Ser Ile Val Val Glu
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Substitute Sequence Listing.ST25.txt

50

55

60

```

Ser Ser Glu Val Asn Glu Glu Ser Gly Asp Leu His Leu Pro His Glu
65                                     70       75       80
-----
Glu Leu Leu Leu Leu Thr Asp Gly Glu Glu Glu Asp Ala Glu Ala Phe
85                                     90       95
Phe Gln Asp Gln Ser Glu Glu Pro Gly Ala Ala Arg Pro His His Gln
100                                105                                110
Ala Arg Gln Val Glu His Ser Thr Gln Arg Gly His Leu Glu Ile Arg
115                                120                                125
Glu Leu Lys Lys Lys Leu Phe Lys Arg Arg Arg Val Leu Asn Arg Glu
130                                135                                140
Arg Arg Leu Arg His Arg Val Val Gly Ala Val Ile Asp Gln Gly Leu
145                                150                                155                                160
Ile Thr Arg His His Leu Lys Lys Arg Ala Ala Gln Glu Leu Ser Gln
165                                170                                175
Glu Ile Lys Ala Phe Leu Thr Gly Val Asp Pro Ile Leu Gly His Gln
180                                185                                190
Leu Ser Ala Arg Glu His Ala Arg Cys Gly Leu Leu Leu Leu Arg Ser
195                                200                                205
Leu Pro Pro Ala Arg Ala Ala Val Leu Asp His Leu Arg Gly Val Phe
210                                215                                220
Asp Glu Ser Val Arg Ala His Leu Ala Ala Leu Asp Glu Thr Pro Val
225                                230                                235                                240
Ala Gly Pro Pro His Leu Arg Pro Pro Pro Pro Ser His Val Pro Ala
245                                250                                255
Gly Gly Pro Gly Leu Glu Asp Val Val Gln Glu Val Gln Gln Val Leu
260                                265                                270
Ser Glu Phe Ile Arg Ala Asn Pro Lys Ala Trp Ala Pro Val Ile Ser
275                                280                                285
Ala Trp Ser Ile Asp Leu Met Gly Gln Leu Ser Ser Thr Tyr Ser Gly
290                                295                                300
Gln His Gln Arg Val Pro His Ala Thr Gly Ala Leu Asn Glu Leu Leu
305                                310                                315                                320
Gln Leu Trp Met Gly Cys Arg Ala Thr Arg Thr Leu Met Asp Ile Tyr

```

Substitute Sequence Listing.ST25.txt
325 330 335

```

val Gln Cys Leu Ser Ala Leu Ile Gly Ser Cys Pro Asp Ala Cys val
340 345 350
-----
Asp Ala Leu Leu Asp Thr Ser Val Gln His Ser Pro His Phe Asp Trp
355 360 365
-----
val val Ala His Ile Gly Ser Ser Phe Pro Gly Thr Ile Ile Ser Arg
370 375 380
-----
val Leu Ser Cys Gly Leu Lys Asp Phe Cys val His Gly Gly Ala Gly
385 390 395 400
-----
Gly Gly Ala Gly Ser Ser Gly Gly Ser Ser Ser Gln Thr Pro Ser Thr
405 410 415
-----
Asp Pro Phe Pro Gly Ser Pro Ala Ile Pro Ala Glu Lys Arg val Pro
420 425 430
-----
Lys Ile Ala Ser val val Gly Ile Leu Gly His Leu Ala Ser Arg His
435 440 445
-----
Gly Asp Ser Ile Arg Arg Glu Leu Leu Arg Met Phe His Asp Ser Leu
450 455 460
-----
Ala Gly Gly Ser Gly Gly Arg Ser Gly Asp Pro Ser Leu Gln Ala Thr
465 470 475 480
-----
val Pro Phe Leu Leu Gln Leu Ala Val Met Ser Pro Ala Leu Leu Gly
485 490 495
-----
Thr val Ser Gly Glu Leu val Asp Cys Leu Lys Pro Pro Ala val Leu
500 505 510
-----
Ser Gln Leu Gln Gln His Leu Gln Gly Phe Pro Arg Glu Glu Leu Asp
515 520 525
-----
Asn Met Leu Asn Leu Ala val His Leu val Ser Gln Ala Ser Gly Ala
530 535 540
-----
Gly Ala Tyr Arg Leu Leu Gln Phe Leu val Asp Thr Ala Met Pro Ala
545 550 555 560
-----
Ser val Ile Thr Thr Gln Gly Leu Ala val Pro Asp Thr val Arg Glu
565 570 575
-----
Ala Cys Asp Arg Leu Ile Gln Leu Leu Leu Leu His Leu Gln Lys Leu
580 585 590
-----
val His His Arg Gly Gly Ser Pro Gly Glu Gly val Leu Gly Pro Pro

```

Substitute Sequence Listing.ST25.txt

595

600

605

Pro Pro Pro Arg Leu Val Pro Phe Leu Asp Ala Leu Lys Asn His Val
610 615 620

Gly Glu Leu Cys Gly Glu Thr Leu Arg Leu Glu Arg Lys Arg Phe Leu
625 630 635 640

Trp Gln His Gln Leu Leu Gly Leu Leu Ser Val Tyr Thr Arg Pro Ser
645 650 655

Cys Gly Pro Glu Ala Leu Pro His Leu Leu Ser Arg Ala Arg Ser Pro
660 665 670

Glu Glu Leu Ser Leu Ala Thr Gln Leu Tyr Ala Gly Leu Val Val Ser
675 680 685

Leu Ser Gly Leu Leu Pro Leu Ala Phe Arg Ser Cys Leu Ala Arg Val
690 695 700

His Ala Gly Thr Leu Gln Pro Pro Phe Thr Ala Arg Phe Leu Arg Asn
705 710 715 720

Leu Ala Leu Leu Val Gly Trp Glu Gln Gln Gly Gly Glu Gly Pro Ala
725 730 735

Ala Leu Gly Ala His Phe Gly Glu Ser Ala Ser Ala His Leu Ser Asp
740 745 750

Leu Ala Pro Leu Leu Leu His Pro Glu Glu Glu Val Ala Glu Ala Ala
755 760 765

Ala Ser Leu Leu Ala Ile Cys Pro Phe Pro Ser Glu Ala Leu Ser Pro
770 775 780

Ser Gln Leu Leu Gly Leu Val Arg Ala Gly Val His Arg Phe Phe Ala
785 790 795 800

Ser Leu Arg Leu His Gly Pro Pro Gly Val Ala Ser Ala Cys Gln Leu
805 810 815

Leu Thr Arg Leu Ser Gln Thr Ser Pro Ala Gly Leu Lys Ala Val Leu
820 825 830

Gln Leu Leu Val Glu Gly Ala Leu His Arg Gly Asn Thr Glu Leu Phe
835 840 845

Gly Gly Gln Val Asp Gly Asp Asn Glu Thr Leu Ser Val Val Ser Ala
850 855 860

Ser Leu Ala Ser Ala Ser Leu Leu Asp Thr Asn Arg Arg His Thr Ala

865 870 875 880

Ala Val Leu His Ser Val Leu His Arg Asn Ile Asp Arg Leu Gly
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Substitute Sequence Listing.ST25.txt

1130

1135

1140

Leu Phe Ser Gly Arg Phe Gln Ala Pro Ser Pro Ser Thr Leu Leu
1145 1150 1155

Arg Gln Gly Thr
1160

<210> 10
<211> 1162
<212> PRT
<213> Artificial

<220>
<223> A variant of the human BFLP1698 polypeptide

<400> 10

Met Ala Leu Val Pro Gly Arg Ser Lys Glu Asp Gly Leu Trp Thr Arg
1 5 10 15

Asn Ser Pro Gly Ser Ser Gln His Pro Glu Ser Pro Arg Leu Pro Asn
20 25 30

Pro Leu Trp Asp Arg Gly Lys Ile Gly Lys Val Glu Gly His Gln His
35 40 45

Ile Gln Asp Phe Ser Gln Lys Ser His Leu Pro Ser Ile Val Val Glu
50 55 60

Ser Ser Glu Val Asn Glu Glu Ser Gly Asp Leu His Leu Pro His Glu
65 70 75 80

Glu Leu Leu Leu Leu Thr Asp Gly Glu Glu Glu Asp Ala Glu Ala Phe
85 90 95

Phe Gln Asp Gln Ser Glu Glu Pro Gly Ala Ala Arg Pro His His Gln
100 105 110

Ala Arg Gln Val Glu His Ser Thr Gln Arg Gly His Leu Glu Ile Arg
115 120 125

Glu Leu Lys Lys Lys Leu Phe Lys Arg Arg Arg Val Leu Asn Arg Glu
130 135 140

Arg Arg Leu Arg His Arg Val Val Gly Ala Val Ile Asp Gln Gly Leu
145 150 155 160

Ile Thr Arg His His Leu Lys Lys Arg Ala Ala Gln Glu Leu Ser Gln
165 170 175

Glu Ile Lys Ala Phe Leu Thr Gly Val Asp Pro Ile Leu Gly His Gln
180 185 190

Substitute Sequence Listing.ST25.txt

Leu Ser Ala Arg Glu His Ala Arg Cys Gly Leu Leu Leu Leu Arg Ser
195 200 205

Leu Pro Pro Ala Arg Ala Ala Val Leu Asp His Leu Arg Gly Val Phe
210 215 220

Asp Glu Ser Val Arg Ala His Leu Ala Ala Leu Asp Glu Thr Pro Val
225 230 235 240

Ala Gly Pro Pro His Leu Arg Pro Pro Pro Pro Ser His Val Pro Ala
245 250 255

Gly Gly Pro Gly Leu Glu Asp Val Val Gln Glu Val Gln Gln Val Leu
260 265 270

Ser Glu Phe Ile Arg Ala Asn Pro Lys Ala Trp Ala Pro Val Ile Ser
275 280 285

Ala Trp Ser Ile Asp Leu Met Gly Gln Leu Ser Ser Thr Tyr Ser Gly
290 295 300

Gln His Gln Arg Val Pro His Ala Thr Gly Ala Leu Asn Glu Leu Leu
305 310 315 320

Gln Leu Trp Met Gly Cys Arg Ala Thr Arg Thr Leu Met Asp Ile Tyr
325 330 335

Val Gln Cys Leu Ser Ala Leu Ile Gly Ser Cys Pro Asp Ala Cys Val
340 345 350

Asp Ala Leu Leu Asp Thr Ser Val Gln His Ser Pro His Phe Asp Trp
355 360 365

Val Val Ala His Ile Gly Ser Ser Phe Pro Gly Thr Ile Ile Ser Arg
370 375 380

Val Leu Ser Cys Gly Leu Lys Asp Phe Cys Val His Gly Gly Ala Gly
385 390 395 400

Gly Gly Ala Gly Ser Ser Gly Gly Ser Ser Ser Gln Thr Pro Ser Thr
405 410 415

Asp Pro Phe Pro Gly Ser Pro Ala Ile Pro Ala Glu Lys Arg Val Pro
420 425 430

Lys Ile Ala Ser Val Val Gly Ile Leu Gly His Leu Ala Ser Arg His
435 440 445

Gly Asp Ser Ile Arg Arg Glu Leu Leu Arg Met Phe His Asp Ser Leu
450 455 460

Substitute Sequence Listing.ST25.txt

Ala Gly Gly Ser Gly Gly Arg Ser Gly Asp Pro Ser Leu Gln Ala Thr
465 470 475 480

Val Pro Phe Leu Leu Gln Leu Ala Val Met Ser Pro Ala Leu Leu Gly
485 490 495

Thr Val Ser Gly Glu Leu Val Asp Cys Leu Lys Pro Pro Ala Val Leu
500 505 510

Ser Gln Leu Gln Gln His Leu Gln Gly Phe Pro Arg Glu Glu Leu Asp
515 520 525

Asn Met Leu Asn Leu Ala Val His Leu Val Ser Gln Ala Ser Gly Ala
530 535 540

Gly Ala Tyr Arg Leu Leu Gln Phe Leu Val Asp Thr Ala Met Pro Ala
545 550 555 560

Ser Val Ile Thr Thr Gln Gly Leu Ala Val Pro Asp Thr Val Arg Glu
565 570 575

Ala Cys Asp Arg Leu Ile Gln Leu Leu Leu Leu His Leu Gln Lys Leu
580 585 590

Val His His Arg Gly Gly Ser Pro Gly Glu Gly Val Leu Gly Pro Pro
595 600 605

Pro Pro Pro Arg Leu Val Pro Phe Leu Asp Ala Leu Lys Asn His Val
610 615 620

Gly Glu Leu Cys Gly Glu Thr Leu Arg Leu Glu Arg Lys Arg Phe Leu
625 630 635 640

Trp Gln His Gln Leu Leu Gly Leu Leu Ser Val Tyr Thr Arg Pro Ser
645 650 655

Cys Gly Pro Glu Ala Leu Gly His Leu Leu Ser Arg Ala Arg Ser Pro
660 665 670

Glu Glu Leu Ser Leu Ala Thr Gln Leu Tyr Ala Gly Leu Val Val Ser
675 680 685

Leu Ser Gly Leu Leu Pro Leu Ala Phe Arg Ser Cys Leu Ala Arg Val
690 695 700

His Ala Gly Thr Leu Gln Pro Pro Phe Thr Ala Arg Phe Leu Arg Asn
705 710 715 720

Leu Ala Leu Leu Val Gly Trp Glu Gln Gln Gly Gly Asp Gly Pro Ala
725 730 735

Substitute Sequence Listing.ST25.txt

Ala Leu Gly Ala His Phe Gly Glu Ser Ala Ser Ala His Leu Ser Asp
740 745 750

Leu Ala Pro Leu Leu Leu His Pro Glu Glu Glu Val Ala Glu Ala Ala
755 760 765

Ala Ser Leu Leu Ala Ile Cys Pro Phe Pro Ser Glu Ala Leu Ser Pro
770 775 780

Ser Gln Leu Leu Gly Leu Val Arg Ala Gly Val His Arg Phe Phe Ala
785 790 795 800

Ser Leu Arg Leu His Gly Pro Pro Gly Val Ala Ser Ala Cys Gln Leu
805 810 815

Leu Thr Arg Leu Ser Gln Thr Ser Pro Ala Gly Leu Lys Ala Val Leu
820 825 830

Gln Leu Leu Val Glu Gly Ala Leu His Arg Gly Asn Thr Glu Leu Phe
835 840 845

Gly Gly Gln Val Asp Gly Asp Asn Glu Thr Leu Ser Val Val Ser Ala
850 855 860

Ser Leu Ala Ser Ala Ser Leu Leu Asp Thr Asn Arg Arg His Thr Ala
865 870 875 880

Ala Val Pro Gly Pro Gly Gly Ile Trp Ser Val Phe His Ala Gly Val
885 890 895

Ile Gly Arg Gly Leu Lys Pro Pro Lys Phe Val Gln Ser Arg Asn Gln
900 905 910

Gln Glu Val Ile Tyr Asn Thr Gln Ser Leu Leu Ser Leu Leu Val His
915 920 925

Cys Cys Ser Ala Pro Gly Gly Thr Glu Cys Gly Glu Cys Trp Gly Ala
930 935 940

Pro Ile Leu Ser Pro Glu Ala Ala Lys Ala Val Ala Val Thr Leu Val
945 950 955 960

Glu Ser Val Cys Pro Asp Ala Ala Gly Ala Glu Leu Ala Trp Pro Pro
965 970 975

Glu Glu His Ala Arg Ala Thr Val Glu Arg Asp Leu Arg Ile Gly Arg
980 985 990

Arg Phe Arg Glu Gln Pro Leu Leu Phe Glu Leu Leu Lys Leu Val Ala
995 1000 1005

Substitute Sequence Listing.ST25.txt

Ala Ala Pro Pro Ala Leu Cys Tyr Cys Ser Val Leu Leu Arg Gly
1010 1015 1020

Leu Leu Ala Ala Leu Leu Gly His Trp Glu Ala Ser Arg His Pro
1025 1030 1035

Asp Thr Thr His Ser Pro Trp His Leu Glu Ala Ser Cys Thr Leu
1040 1045 1050

Val Ala Val Met Ala Glu Gly Ser Leu Leu Pro Pro Ala Leu Gly
1055 1060 1065

Asn Met His Glu Val Phe Ser Gln Leu Ala Pro Phe Glu Val Arg
1070 1075 1080

Leu Leu Leu Leu Ser Val Trp Gly Phe Leu Arg Glu His Gly Pro
1085 1090 1095

Leu Pro Gln Lys Phe Ile Phe Gln Ser Glu Arg Gly Arg Phe Ile
1100 1105 1110

Arg Asp Phe Ser Arg Glu Gly Gly Gly Glu Gly Gly Pro His Leu
1115 1120 1125

Ala Val Leu His Ser Val Leu His Arg Asn Ile Asp Arg Leu Gly
1130 1135 1140

Leu Phe Ser Gly Arg Phe Gln Ala Pro Ser Pro Ser Thr Leu Leu
1145 1150 1155

Arg Gln Gly Thr
1160

<210> 11
<211> 1162
<212> PRT
<213> Artificial

<220>
<223> A variant of the human BFLP1698 polypeptide

<400> 11

Met Ala Leu Val Pro Gly Arg Ser Lys Glu Asp Gly Leu Trp Thr Arg
1 5 10 15

Asn Ser Pro Gly Ser Ser Gln His Pro Glu Ser Pro Arg Leu Pro Asn
20 25 30

Pro Leu Trp Asp Arg Gly Lys Ile Gly Lys Val Glu Gly His Gln His
35 40 45

Ile Gln Asp Phe Ser Gln Lys Ser His Leu Pro Ser Ile Val Val Glu
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Substitute Sequence Listing.ST25.txt

50

55

60

Ser Ser Glu Val Asn Glu Glu Ser Gly Asp Leu His Leu Pro His Glu
65 70 75 80

Glu Leu Leu Leu Leu Thr Asp Gly Glu Glu Glu Asp Ala Glu Ala Phe
85 90 95

Phe Gln Asp Gln Ser Glu Glu Pro Gly Ala Ala Arg Pro His His Gln
100 105 110

Ala Arg Gln Val Glu His Ser Thr Gln Arg Gly His Leu Glu Ile Arg
115 120 125

Glu Leu Lys Lys Lys Leu Phe Lys Arg Arg Arg Val Leu Asn Arg Glu
130 135 140

Arg Arg Leu Arg His Arg Val Val Gly Ala Val Ile Asp Gln Gly Leu
145 150 155 160

Ile Thr Arg His His Leu Lys Lys Arg Ala Ala Gln Glu Leu Ser Gln
165 170 175

Glu Ile Lys Ala Phe Leu Thr Gly Val Asp Pro Ile Leu Gly His Gln
180 185 190

Leu Ser Ala Arg Glu His Ala Arg Cys Gly Leu Leu Leu Leu Arg Ser
195 200 205

Leu Pro Pro Ala Arg Ala Ala Val Leu Asp His Leu Arg Gly Val Phe
210 215 220

Asp Glu Ser Val Arg Ala His Leu Ala Ala Leu Asp Glu Thr Pro Val
225 230 235 240

Ala Gly Pro Pro His Leu Arg Pro Pro Pro Pro Ser His Val Pro Ala
245 250 255

Gly Gly Pro Gly Leu Glu Asp Val Val Gln Glu Val Gln Gln Val Leu
260 265 270

Ser Glu Phe Ile Arg Ala Asn Pro Lys Ala Trp Ala Pro Val Ile Ser
275 280 285

Ala Trp Ser Ile Asp Leu Met Gly Gln Leu Ser Ser Thr Tyr Ser Gly
290 295 300

Gln His Gln Arg Val Pro His Ala Thr Gly Ala Leu Asn Glu Leu Leu
305 310 315 320

Gln Leu Trp Met Gly Cys Arg Ala Thr Arg Thr Leu Met Asp Ile Tyr

Substitute Sequence Listing.ST25.txt

325

330

335

Val Gln Cys Leu Ser Ala Leu Ile Gly Ser Cys Pro Asp Ala Cys Val
340 345 350

Asp Ala Leu Leu Asp Thr Ser Val Gln His Ser Pro His Phe Asp Trp
355 360 365

Val Val Ala His Ile Gly Ser Ser Phe Pro Gly Thr Ile Ile Ser Arg
370 375 380

Val Leu Ser Cys Gly Leu Lys Asp Phe Cys Val His Gly Gly Ala Gly
385 390 395 400

Gly Gly Ala Gly Ser Ser Gly Gly Ser Ser Ser Gln Thr Pro Ser Thr
405 410 415

Asp Pro Phe Pro Gly Ser Pro Ala Ile Pro Ala Glu Lys Arg Val Pro
420 425 430

Lys Ile Ala Ser Val Val Gly Ile Leu Gly His Leu Ala Ser Arg His
435 440 445

Gly Asp Ser Ile Arg Arg Glu Leu Leu Arg Met Phe His Asp Ser Leu
450 455 460

Ala Gly Gly Ser Gly Gly Arg Ser Gly Asp Pro Ser Leu Gln Ala Thr
465 470 475 480

Val Pro Phe Leu Leu Gln Leu Ala Val Met Ser Pro Ala Leu Leu Gly
485 490 495

Thr Val Ser Gly Glu Leu Val Asp Cys Leu Lys Pro Pro Ala Val Leu
500 505 510

Ser Gln Leu Gln Gln His Leu Gln Gly Phe Pro Arg Glu Glu Leu Asp
515 520 525

Asn Met Leu Asn Leu Ala Val His Leu Val Ser Gln Ala Ser Gly Ala
530 535 540

Gly Ala Tyr Arg Leu Leu Gln Phe Leu Val Asp Thr Ala Met Pro Ala
545 550 555 560

Ser Val Ile Thr Thr Gln Gly Leu Ala Val Pro Asp Thr Val Arg Glu
565 570 575

Ala Cys Asp Arg Leu Ile Gln Leu Leu Leu His Leu Gln Lys Leu
580 585 590

Val His His Arg Gly Gly Ser Pro Gly Glu Gly Val Leu Gly Pro Pro

Substitute Sequence Listing.ST25.txt

595

600

605

Pro Pro Pro Arg Leu Val Pro Phe Leu Asp Ala Leu Lys Asn His Val
610 615 620

Gly Glu Leu Cys Gly Glu Thr Leu Arg Leu Glu Arg Lys Arg Phe Leu
625 630 635 640

Trp Gln His Gln Leu Leu Gly Leu Leu Ser Val Tyr Thr Arg Pro Ser
645 650 655

Cys Gly Pro Glu Ala Leu Gly His Leu Leu Ser Arg Ala Arg Ser Pro
660 665 670

Glu Glu Leu Ser Leu Ala Thr Gln Leu Tyr Ala Gly Leu Val Val Ser
675 680 685

Leu Ser Gly Leu Leu Pro Leu Ala Phe Arg Ser Cys Leu Ala Arg Val
690 695 700

His Ala Gly Thr Leu Gln Pro Pro Phe Thr Ala Arg Phe Leu Arg Asn
705 710 715 720

Leu Ala Leu Leu Val Gly Trp Glu Gln Gln Gly Gly Glu Gly Pro Ala
725 730 735

Ala Leu Gly Ala His Phe Gly Glu Ser Ala Ser Ala His Leu Ser Asp
740 745 750

Leu Ala Pro Leu Leu Leu His Pro Glu Glu Glu Val Ala Glu Ala Ala
755 760 765

Ala Ser Leu Leu Ala Ile Cys Pro Phe Pro Ser Glu Ala Leu Ser Pro
770 775 780

Ser Gln Leu Leu Gly Leu Val Arg Ala Gly Val His Arg Phe Phe Ala
785 790 795 800

Ser Leu Arg Leu His Gly Pro Pro Gly Val Ala Ser Ala Cys Gln Leu
805 810 815

Leu Thr Arg Leu Ser Gln Thr Ser Pro Ala Gly Leu Lys Ala Val Leu
820 825 830

Gln Leu Leu Val Glu Gly Ala Leu His Arg Gly Asn Thr Glu Leu Phe
835 840 845

Gly Gly Gln Val Asp Gly Asp Asn Glu Ala Leu Ser Val Val Ser Ala
850 855 860

Ser Leu Ala Ser Ala Ser Leu Leu Asp Thr Asn Arg Arg His Thr Ala

Substitute Sequence Listing.ST25.txt

865 870 875 880

Ala Val Pro Gly Pro Gly Gly Ile Trp Ser Val Phe His Ala Gly Val
885 890 895

Ile Gly Arg Gly Leu Lys Pro Pro Lys Phe Val Gln Ser Arg Asn Gln
900 905 910

Gln Glu Val Ile Tyr Asn Thr Gln Ser Leu Leu Ser Leu Leu Val His
915 920 925

Cys Cys Ser Ala Pro Gly Gly Thr Glu Cys Gly Glu Cys Trp Gly Ala
930 935 940

Pro Ile Leu Ser Pro Glu Ala Ala Lys Ala Val Ala Val Thr Leu Val
945 950 955 960

Glu Ser Val Cys Pro Asp Ala Ala Gly Ala Glu Leu Ala Trp Pro Pro
965 970 975

Glu Glu His Ala Arg Ala Thr Val Glu Arg Asp Leu Arg Ile Gly Arg
980 985 990

Arg Phe Arg Glu Gln Pro Leu Leu Phe Glu Leu Leu Lys Leu Val Ala
995 1000 1005

Ala Ala Pro Pro Ala Leu Cys Tyr Cys Ser Val Leu Leu Arg Gly
1010 1015 1020

Leu Leu Ala Ala Leu Leu Gly His Trp Glu Ala Ser Arg His Pro
1025 1030 1035

Asp Thr Thr His Ser Pro Trp His Leu Glu Ala Ser Cys Thr Leu
1040 1045 1050

Val Ala Val Met Ala Glu Gly Ser Leu Leu Pro Pro Ala Leu Gly
1055 1060 1065

Asn Met His Glu Val Phe Ser Gln Leu Ala Pro Phe Glu Val Arg
1070 1075 1080

Leu Leu Leu Leu Ser Val Trp Gly Phe Leu Arg Glu His Gly Pro
1085 1090 1095

Leu Pro Gln Lys Phe Ile Phe Gln Ser Glu Arg Gly Arg Phe Ile
1100 1105 1110

Arg Asp Phe Ser Arg Glu Gly Gly Gly Glu Gly Gly Pro His Leu
1115 1120 1125

Ala Val Leu His Ser Val Leu His Arg Asn Ile Asp Arg Leu Gly

Substitute Sequence Listing.ST25.txt

1130

1135

1140

Leu Phe Ser Gly Arg Phe Gln Ala Pro Ser Pro Ser Thr Leu Leu
1145 1150 1155

Arg Gln Gly Thr
1160

<210> 12
<211> 1162
<212> PRT
<213> Artificial

<220>
<223> A variant of the human BFLP1698 polypeptide

<400> 12

Met Ala Leu Val Pro Gly Arg Ser Lys Glu Asp Gly Leu Trp Thr Arg
1 5 10 15

Asn Ser Pro Gly Ser Ser Gln His Pro Glu Ser Pro Arg Leu Pro Asn
20 25 30

Pro Leu Trp Asp Arg Gly Lys Ile Gly Lys Val Glu Gly His Gln His
35 40 45

Ile Gln Asp Phe Ser Gln Lys Ser His Leu Pro Ser Ile Val Val Glu
50 55 60

Ser Ser Glu Val Asn Glu Glu Ser Gly Asp Leu His Leu Pro His Glu
65 70 75 80

Glu Leu Leu Leu Leu Thr Asp Gly Glu Glu Glu Asp Ala Glu Ala Phe
85 90 95

Phe Gln Asp Gln Ser Glu Glu Pro Gly Ala Ala Arg Pro His His Gln
100 105 110

Ala Arg Gln Val Glu His Ser Thr Gln Arg Gly His Leu Glu Ile Arg
115 120 125

Glu Leu Lys Lys Lys Leu Phe Lys Arg Arg Arg Val Leu Asn Arg Glu
130 135 140

Arg Arg Leu Arg His Arg Val Val Gly Ala Val Ile Asp Gln Gly Leu
145 150 155 160

Ile Thr Arg His His Leu Lys Lys Arg Ala Ala Gln Glu Leu Ser Gln
165 170 175

Glu Ile Lys Ala Phe Leu Thr Gly Val Asp Pro Ile Leu Gly His Gln
180 185 190

Substitute Sequence Listing.ST25.txt

Leu Ser Ala Arg Glu His Ala Arg Cys Gly Leu Leu Leu Leu Arg Ser
 195 200 205
 Leu Pro Pro Ala Arg Ala Ala Val Leu Asp His Leu Arg Gly Val Phe
 210 215 220
 Asp Glu Ser Val Arg Ala His Leu Ala Ala Leu Asp Glu Thr Pro Val
 225 230 235 240
 Ala Gly Pro Pro His Leu Arg Pro Pro Pro Pro Ser His Val Pro Ala
 245 250 255
 Gly Gly Pro Gly Leu Glu Asp Val Val Gln Glu Val Gln Gln Val Leu
 260 265 270
 Ser Glu Phe Ile Arg Ala Asn Pro Lys Ala Trp Ala Pro Val Ile Ser
 275 280 285
 Ala Trp Ser Ile Asp Leu Met Gly Gln Leu Ser Ser Thr Tyr Ser Gly
 290 295 300
 Gln His Gln Arg Val Pro His Ala Thr Gly Ala Leu Asn Glu Leu Leu
 305 310 315 320
 Gln Leu Trp Met Gly Cys Arg Ala Thr Arg Thr Leu Met Asp Ile Tyr
 325 330 335
 Val Gln Cys Leu Ser Ala Leu Ile Gly Ser Cys Pro Asp Ala Cys Val
 340 345 350
 Asp Ala Leu Leu Asp Thr Ser Val Gln His Ser Pro His Phe Asp Trp
 355 360 365
 Val Val Ala His Ile Gly Ser Ser Phe Pro Gly Thr Ile Ile Ser Arg
 370 375 380
 Val Leu Ser Cys Gly Leu Lys Asp Phe Cys Val His Gly Gly Ala Gly
 385 390 395 400
 Gly Gly Ala Gly Ser Ser Gly Gly Ser Ser Ser Gln Thr Pro Ser Thr
 405 410 415
 Asp Pro Phe Pro Gly Ser Pro Ala Ile Pro Ala Glu Lys Arg Val Pro
 420 425 430
 Lys Ile Ala Ser Val Val Gly Ile Leu Gly His Leu Ala Ser Arg His
 435 440 445
 Gly Asp Ser Ile Arg Arg Glu Leu Leu Arg Met Phe His Asp Ser Leu
 450 455 460

Substitute Sequence Listing.ST25.txt

Ala Gly Gly Ser Gly Gly Arg Ser Gly Asp Pro Ser Leu Gln Ala Thr
465 470 475 480

Val Pro Phe Leu Leu Gln Leu Ala Val Met Ser Pro Ala Leu Leu Gly
485 490 495

Thr Val Ser Gly Glu Leu Val Asp Cys Leu Lys Pro Pro Ala Val Leu
500 505 510

Ser Gln Leu Gln Gln His Leu Gln Gly Phe Pro Arg Glu Glu Leu Asp
515 520 525

Asn Met Leu Asn Leu Ala Val His Leu Val Ser Gln Ala Ser Gly Ala
530 535 540

Gly Ala Tyr Arg Leu Leu Gln Phe Leu Val Asp Thr Ala Met Pro Ala
545 550 555 560

Ser Val Ile Thr Thr Gln Gly Leu Ala Val Pro Asp Thr Val Arg Glu
565 570 575

Ala Cys Asp Arg Leu Ile Gln Leu Leu Leu Leu His Leu Gln Lys Leu
580 585 590

Val His His Arg Gly Gly Ser Pro Gly Glu Gly Val Leu Gly Pro Pro
595 600 605

Pro Pro Pro Arg Leu Val Pro Phe Leu Asp Ala Leu Lys Asn His Val
610 615 620

Gly Glu Leu Cys Gly Glu Thr Leu Arg Leu Glu Arg Lys Arg Phe Leu
625 630 635 640

Trp Gln His Gln Leu Leu Gly Leu Leu Ser Val Tyr Thr Arg Pro Ser
645 650 655

Cys Gly Pro Glu Ala Leu Gly His Leu Leu Ser Arg Ala Arg Ser Pro
660 665 670

Glu Glu Leu Ser Leu Ala Thr Gln Leu Tyr Ala Gly Leu Val Val Ser
675 680 685

Leu Ser Gly Leu Leu Pro Leu Ala Phe Arg Ser Cys Leu Ala Arg Val
690 695 700

His Ala Gly Thr Leu Gln Pro Pro Phe Thr Ala Arg Phe Leu Arg Asn
705 710 715 720

Leu Ala Leu Leu Val Gly Trp Glu Gln Gln Gly Gly Glu Gly Pro Ala
725 730 735

Substitute Sequence Listing.ST25.txt

Ala Leu Gly Ala His Phe Gly Glu Ser Ala Ser Ala His Leu Ser Asp
740 745 750

Leu Ala Pro Leu Leu Leu His Pro Glu Glu Glu Val Ala Glu Ala Ala
755 760 765

Ala Ser Leu Leu Ala Ile Cys Pro Phe Pro Ser Glu Ala Leu Ser Pro
770 775 780

Ser Gln Leu Leu Gly Leu Val Arg Ala Gly Val His Arg Phe Phe Ala
785 790 795 800

Ser Leu Arg Leu His Gly Pro Pro Gly Val Ala Ser Ala Cys Gln Leu
805 810 815

Leu Thr Arg Leu Ser Gln Thr Ser Pro Ala Gly Leu Lys Ala Val Leu
820 825 830

Gln Leu Leu Val Glu Gly Ala Leu His Arg Gly Asn Thr Glu Leu Phe
835 840 845

Gly Gly Gln Val Asp Gly Asp Asn Glu Thr Leu Ser Val Val Ser Ala
850 855 860

Ser Leu Ala Ser Ala Ser Leu Leu Asp Thr Asn Arg Arg His Thr Ala
865 870 875 880

Ala Val Pro Gly Pro Gly Gly Ile Trp Ser Val Phe His Ala Gly Val
885 890 895

Ile Gly Arg Gly Leu Lys Pro Pro Lys Phe Val Gln Ser Arg Asn Gln
900 905 910

Gln Glu Val Ile Tyr Asn Thr Gln Ser Leu Leu Ser Leu Leu Val His
915 920 925

Cys Cys Ser Ala Pro Gly Gly Thr Glu Cys Gly Glu Cys Trp Gly Ala
930 935 940

Pro Ile Leu Ser Pro Glu Ala Ala Lys Ala Val Ala Val Thr Leu Val
945 950 955 960

Glu Ser Val Cys Pro Asp Ala Ala Gly Ala Glu Leu Ala His Pro Pro
965 970 975

Glu Glu His Ala Arg Ala Thr Val Glu Arg Asp Leu Arg Ile Gly Arg
980 985 990

Arg Phe Arg Glu Gln Pro Leu Leu Phe Glu Leu Leu Lys Leu Val Ala
995 1000 1005

Substitute Sequence Listing.ST25.txt

Ala Ala Pro Pro Ala Leu Cys Tyr Cys Ser Val Leu Leu Arg Gly
1010 1015 1020

Leu Leu Ala Ala Leu Leu Gly His Trp Glu Ala Ser Arg His Pro
1025 1030 1035

Asp Thr Thr His Ser Pro Trp His Leu Glu Ala Ser Cys Thr Leu
1040 1045 1050

Val Ala Val Met Ala Glu Gly Ser Leu Leu Pro Pro Ala Leu Gly
1055 1060 1065

Asn Met His Glu Val Phe Ser Gln Leu Ala Pro Phe Glu Val Arg
1070 1075 1080

Leu Leu Leu Leu Ser Val Trp Gly Phe Leu Arg Glu His Gly Pro
1085 1090 1095

Leu Pro Gln Lys Phe Ile Phe Gln Ser Glu Arg Gly Arg Phe Ile
1100 1105 1110

Arg Asp Phe Ser Arg Glu Gly Gly Gly Glu Gly Gly Pro His Leu
1115 1120 1125

Ala Val Leu His Ser Val Leu His Arg Asn Ile Asp Arg Leu Gly
1130 1135 1140

Leu Phe Ser Gly Arg Phe Gln Ala Pro Ser Pro Ser Thr Leu Leu
1145 1150 1155

Arg Gln Gly Thr
1160

<210> 13
<211> 1162
<212> PRT
<213> Artificial

<220>
<223> A variant of the human BFLP1698 polypeptide

<400> 13

Met Ala Leu Val Pro Gly Arg Ser Lys Glu Asp Gly Leu Trp Thr Arg
1 5 10 15

Asn Ser Pro Gly Ser Ser Gln His Pro Glu Ser Pro Arg Leu Pro Asn
20 25 30

Pro Leu Trp Asp Arg Gly Lys Ile Gly Lys Val Glu Gly His Gln His
35 40 45

Ile Gln Asp Phe Ser Gln Lys Ser His Leu Pro Ser Ile Val Val Glu
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Substitute Sequence Listing.ST25.txt

50

55

60

Ser Ser Glu Val Asn Glu Glu Ser Gly Asp Leu His Leu Pro His Glu
65 70 75 80

Glu Leu Leu Leu Leu Thr Asp Gly Glu Glu Glu Asp Ala Glu Ala Phe
85 90 95

Phe Gln Asp Gln Ser Glu Glu Pro Gly Ala Ala Arg Pro His His Gln
100 105 110

Ala Arg Gln Val Glu His Ser Thr Gln Arg Gly His Leu Glu Ile Arg
115 120 125

Glu Leu Lys Lys Lys Leu Phe Lys Arg Arg Arg Val Leu Asn Arg Glu
130 135 140

Arg Arg Leu Arg His Arg Val Val Gly Ala Val Ile Asp Gln Gly Leu
145 150 155 160

Ile Thr Arg His His Leu Lys Lys Arg Ala Ala Gln Glu Leu Ser Gln
165 170 175

Glu Ile Lys Ala Phe Leu Thr Gly Val Asp Pro Ile Leu Gly His Gln
180 185 190

Leu Ser Ala Arg Glu His Ala Arg Cys Gly Leu Leu Leu Leu Arg Ser
195 200 205

Leu Pro Pro Ala Arg Ala Ala Val Leu Asp His Leu Arg Gly Val Phe
210 215 220

Asp Glu Ser Val Arg Ala His Leu Ala Ala Leu Asp Glu Thr Pro Val
225 230 235 240

Ala Gly Pro Pro His Leu Arg Pro Pro Pro Pro Ser His Val Pro Ala
245 250 255

Gly Gly Pro Gly Leu Glu Asp Val Val Gln Glu Val Gln Gln Val Leu
260 265 270

Ser Glu Phe Ile Arg Ala Asn Pro Lys Ala Trp Ala Pro Val Ile Ser
275 280 285

Ala Trp Ser Ile Asp Leu Met Gly Gln Leu Ser Ser Thr Tyr Ser Gly
290 295 300

Gln His Gln Arg Val Pro His Ala Thr Gly Ala Leu Asn Glu Leu Leu
305 310 315 320

Gln Leu Trp Met Gly Cys Arg Ala Thr Arg Thr Leu Met Asp Ile Tyr
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Substitute Sequence Listing.ST25.txt
325 330 335

```

val Gln Cys Leu Ser Ala Leu Ile Gly Ser Cys Pro Asp Ala Cys Val
340 345 350
Asp Ala Leu Leu Asp Thr Ser Val Gln His Ser Pro His Phe Asp Trp
355 360 365
Val Val Ala His Ile Gly Ser Ser Phe Pro Gly Thr Ile Ile Ser Arg
370 375 380
Val Leu Ser Cys Gly Leu Lys Asp Phe Cys Val His Gly Gly Ala Gly
385 390 395 400
Gly Gly Ala Gly Ser Ser Gly Gly Ser Ser Ser Gln Thr Pro Ser Thr
405 410 415
Asp Pro Phe Pro Gly Ser Pro Ala Ile Pro Ala Glu Lys Arg Val Pro
420 425 430
Lys Ile Ala Ser Val Val Gly Ile Leu Gly His Leu Ala Ser Arg His
435 440 445
Gly Asp Ser Ile Arg Arg Glu Leu Leu Arg Met Phe His Asp Ser Leu
450 455 460
Ala Gly Gly Ser Gly Gly Arg Ser Gly Asp Pro Ser Leu Gln Ala Thr
465 470 475 480
Val Pro Phe Leu Leu Gln Leu Ala Val Met Ser Pro Ala Leu Leu Gly
485 490 495
Thr Val Ser Gly Glu Leu Val Asp Cys Leu Lys Pro Pro Ala Val Leu
500 505 510
Ser Gln Leu Gln Gln His Leu Gln Gly Phe Pro Arg Glu Glu Leu Asp
515 520 525
Asn Met Leu Asn Leu Ala Val His Leu Val Ser Gln Ala Ser Gly Ala
530 535 540
Gly Ala Tyr Arg Leu Leu Gln Phe Leu Val Asp Thr Ala Met Pro Ala
545 550 555 560
Ser Val Ile Thr Thr Gln Gly Leu Ala Val Pro Asp Thr Val Arg Glu
565 570 575
Ala Cys Asp Arg Leu Ile Gln Leu Leu Leu Leu His Leu Gln Lys Leu
580 585 590
Val His His Arg Gly Gly Ser Pro Gly Glu Gly Val Leu Gly Pro Pro

```

Substitute Sequence Listing.ST25.txt

595

600

605

Pro	Pro	Pro	Arg	Leu	Val	Pro	Phe	Leu	Asp	Ala	Leu	Lys	Asn	His	Val
610						615					620				
Gly	Glu	Leu	Cys	Gly	Glu	Thr	Leu	Arg	Leu	Glu	Arg	Lys	Arg	Phe	Leu
625					630					635					640
Trp	Gln	His	Gln	Leu	Leu	Gly	Leu	Leu	Ser	Val	Tyr	Thr	Arg	Pro	Ser
				645					650					655	
Cys	Gly	Pro	Glu	Ala	Leu	Gly	His	Leu	Leu	Ser	Arg	Ala	Arg	Ser	Pro
			660					665					670		
Glu	Glu	Leu	Ser	Leu	Ala	Thr	Gln	Leu	Tyr	Ala	Gly	Leu	Val	Val	Ser
		675					680					685			
Leu	Ser	Gly	Leu	Leu	Pro	Leu	Ala	Phe	Arg	Ser	Cys	Leu	Ala	Arg	Val
	690					695					700				
His	Ala	Gly	Thr	Leu	Gln	Pro	Pro	Phe	Thr	Ala	Arg	Phe	Leu	Arg	Asn
705					710					715					720
Leu	Ala	Leu	Leu	Val	Gly	Trp	Glu	Gln	Gln	Gly	Gly	Glu	Gly	Pro	Ala
				725					730					735	
Ala	Leu	Gly	Ala	His	Phe	Gly	Glu	Ser	Ala	Ser	Ala	His	Leu	Ser	Asp
			740					745					750		
Leu	Ala	Pro	Leu	Leu	Leu	His	Pro	Glu	Glu	Glu	Val	Ala	Glu	Ala	Ala
		755					760					765			
Ala	Ser	Leu	Leu	Ala	Ile	Cys	Pro	Phe	Pro	Ser	Glu	Ala	Leu	Ser	Pro
	770					775					780				
Ser	Gln	Leu	Leu	Gly	Leu	Val	Arg	Ala	Gly	Val	His	Arg	Phe	Phe	Ala
785					790					795					800
Ser	Leu	Arg	Leu	His	Gly	Pro	Pro	Gly	Val	Ala	Ser	Ala	Cys	Gln	Leu
				805					810					815	
Leu	Thr	Arg	Leu	Ser	Gln	Thr	Ser	Pro	Ala	Gly	Leu	Lys	Ala	Val	Leu
			820					825					830		
Gln	Leu	Leu	Val	Glu	Gly	Ala	Leu	His	Arg	Gly	Asn	Thr	Glu	Leu	Phe
		835					840					845			
Gly	Gly	Gln	Val	Asp	Gly	Asp	Asn	Glu	Thr	Leu	Ser	Val	Val	Ser	Ala
	850					855					860				
Ser	Leu	Ala	Ser	Ala	Ser	Leu	Leu	Asp	Thr	Asn	Arg	Arg	His	Thr	Ala

865 870 875 880

Ala	Val	Pro	Gly	Pro	Gly	Gly	Ile	Trp	Ser	Val	Phe	His	Ala	Gly	Val
				885					890					895	
Ile	Gly	Arg	Gly	Leu	Lys	Pro	Pro	Lys	Phe	Val	Gln	Ser	Arg	Asn	Gln
			900					905					910		
Gln	Glu	Val	Ile	Tyr	Asn	Thr	Gln	Ser	Leu	Leu	Ser	Leu	Leu	Val	His
		915					920					925			
Cys	Cys	Ser	Ala	Pro	Gly	Gly	Thr	Glu	Cys	Gly	Glu	Cys	Trp	Gly	Ala
	930					935					940				
Pro	Ile	Leu	Ser	Pro	Glu	Ala	Ala	Lys	Ala	Val	Ala	Val	Thr	Leu	Val
945					950					955					960
Glu	Ser	Val	Cys	Pro	Asp	Ala	Ala	Gly	Ala	Glu	Leu	Ala	Trp	Pro	Pro
				965					970					975	
Glu	Glu	His	Ala	Arg	Ala	Thr	Val	Glu	Arg	Asp	Leu	Arg	Ile	Gly	Arg
			980					985					990		
Arg	Phe	Arg	Glu	Gln	Pro	Leu	Leu	Phe	Glu	Leu	Leu	Lys	Leu	Val	Ala
		995					1000					1005			
Ala	Ala	Pro	Pro	Ala	Leu	Cys	Tyr	Cys	Ser	Val	Leu	Leu	Arg	Gly	
	1010					1015					1020				
Leu	Leu	Ala	Ala	Leu	Leu	Gly	His	Trp	Glu	Ala	Ser	Arg	His	Thr	
	1025					1030					1035				
Asp	Thr	Thr	His	Ser	Pro	Trp	His	Leu	Glu	Ala	Ser	Cys	Thr	Leu	
	1040					1045					1050				
Val	Ala	Val	Met	Ala	Glu	Gly	Ser	Leu	Leu	Pro	Pro	Ala	Leu	Gly	
	1055					1060					1065				
Asn	Met	His	Glu	Val	Phe	Ser	Gln	Leu	Ala	Pro	Phe	Glu	Val	Arg	
	1070					1075					1080				
Leu	Leu	Leu	Leu	Ser	Val	Trp	Gly	Phe	Leu	Arg	Glu	His	Gly	Pro	
	1085					1090					1095				
Leu	Pro	Gln	Lys	Phe	Ile	Phe	Gln	Ser	Glu	Arg	Gly	Arg	Phe	Ile	
	1100					1105					1110				
Arg	Asp	Phe	Ser	Arg	Glu	Gly	Gly	Gly	Glu	Gly	Gly	Pro	His	Leu	
	1115					1120					1125				
Ala	Val	Leu	His	Ser	Val	Leu	His	Arg	Asn	Ile	Asp	Arg	Leu	Gly	

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Substitute Sequence Listing.ST25.txt

1130

1135

1140

Leu Phe Ser Gly Arg Phe Gln Ala Pro Ser Pro Ser Thr Leu Leu
1145 1150 1155

Arg Gln Gly Thr
1160

<210> 14
<211> 1162
<212> PRT
<213> Artificial

<220>
<223> A variant of the human BFLP1698 polypeptide

<400> 14

Met Ala Leu Val Pro Gly Arg Ser Lys Glu Asp Gly Leu Trp Thr Arg
1 5 10 15

Asn Ser Pro Gly Ser Ser Gln His Pro Glu Ser Pro Arg Leu Pro Asn
20 25 30

Pro Leu Trp Asp Arg Gly Lys Ile Gly Lys Val Glu Gly His Gln His
35 40 45

Ile Gln Asp Phe Ser Gln Lys Ser His Leu Pro Ser Ile Val Val Glu
50 55 60

Ser Ser Glu Val Asn Glu Glu Ser Gly Asp Leu His Leu Pro His Glu
65 70 75 80

Glu Leu Leu Leu Leu Thr Asp Gly Glu Glu Glu Asp Ala Glu Ala Phe
85 90 95

Phe Gln Asp Gln Ser Glu Glu Pro Gly Ala Ala Arg Pro His His Gln
100 105 110

Ala Arg Gln Val Glu His Ser Thr Gln Arg Gly His Leu Glu Ile Arg
115 120 125

Glu Leu Lys Lys Lys Leu Phe Lys Arg Arg Arg Val Leu Asn Arg Glu
130 135 140

Arg Arg Leu Arg His Arg Val Val Gly Ala Val Ile Asp Gln Gly Leu
145 150 155 160

Ile Thr Arg His His Leu Lys Lys Arg Ala Ala Gln Glu Leu Ser Gln
165 170 175

Glu Ile Lys Ala Phe Leu Thr Gly Val Asp Pro Ile Leu Gly His Gln
180 185 190

Substitute Sequence Listing.ST25.txt

Leu Ser Ala Arg Glu His Ala Arg Cys Gly Leu Leu Leu Leu Arg Ser
 195 200 205
 Leu Pro Pro Ala Arg Ala Ala Val Leu Asp His Leu Arg Gly Val Phe
 210 215 220
 Asp Glu Ser Val Arg Ala His Leu Ala Ala Leu Asp Glu Thr Pro Val
 225 230 235 240
 Ala Gly Pro Pro His Leu Arg Pro Pro Pro Pro Ser His Val Pro Ala
 245 250 255
 Gly Gly Pro Gly Leu Glu Asp Val Val Gln Glu Val Gln Gln Val Leu
 260 265 270
 Ser Glu Phe Ile Arg Ala Asn Pro Lys Ala Trp Ala Pro Val Ile Ser
 275 280 285
 Ala Trp Ser Ile Asp Leu Met Gly Gln Leu Ser Ser Thr Tyr Ser Gly
 290 295 300
 Gln His Gln Arg Val Pro His Ala Thr Gly Ala Leu Asn Glu Leu Leu
 305 310 315
 Gln Leu Trp Met Gly Cys Arg Ala Thr Arg Thr Leu Met Asp Ile Tyr
 325 330 335
 Val Gln Cys Leu Ser Ala Leu Ile Gly Ser Cys Pro Asp Ala Cys Val
 340 345 350
 Asp Ala Leu Leu Asp Thr Ser Val Gln His Ser Pro His Phe Asp Trp
 355 360 365
 Val Val Ala His Ile Gly Ser Ser Phe Pro Gly Thr Ile Ile Ser Arg
 370 375 380
 Val Leu Ser Cys Gly Leu Lys Asp Phe Cys Val His Gly Gly Ala Gly
 385 390 395 400
 Gly Gly Ala Gly Ser Ser Gly Gly Ser Ser Ser Gln Thr Pro Ser Thr
 405 410 415
 Asp Pro Phe Pro Gly Ser Pro Ala Ile Pro Ala Glu Lys Arg Val Pro
 420 425 430
 Lys Ile Ala Ser Val Val Gly Ile Leu Gly His Leu Ala Ser Arg His
 435 440 445
 Gly Asp Ser Ile Arg Arg Glu Leu Leu Arg Met Phe His Asp Ser Leu
 450 455 460

Substitute Sequence Listing.ST25.txt

Ala Gly Gly Ser Gly Gly Arg Ser Gly Asp Pro Ser Leu Gln Ala Thr
465 470 475 480

Val Pro Phe Leu Leu Gln Leu Ala Val Met Ser Pro Ala Leu Leu Gly
485 490 495

Thr Val Ser Gly Glu Leu Val Asp Cys Leu Lys Pro Pro Ala Val Leu
500 505 510

Ser Gln Leu Gln Gln His Leu Gln Gly Phe Pro Arg Glu Glu Leu Asp
515 520 525

Asn Met Leu Asn Leu Ala Val His Leu Val Ser Gln Ala Ser Gly Ala
530 535 540

Gly Ala Tyr Arg Leu Leu Gln Phe Leu Val Asp Thr Ala Met Pro Ala
545 550 555 560

Ser Val Ile Thr Thr Gln Gly Leu Ala Val Pro Asp Thr Val Arg Glu
565 570 575

Ala Cys Asp Arg Leu Ile Gln Leu Leu Leu Leu His Leu Gln Lys Leu
580 585 590

Val His His Arg Gly Gly Ser Pro Gly Glu Gly Val Leu Gly Pro Pro
595 600 605

Pro Pro Pro Arg Leu Val Pro Phe Leu Asp Ala Leu Lys Asn His Val
610 615 620

Gly Glu Leu Cys Gly Glu Thr Leu Arg Leu Glu Arg Lys Arg Phe Leu
625 630 635 640

Trp Gln His Gln Leu Leu Gly Leu Leu Ser Val Tyr Thr Arg Pro Ser
645 650 655

Cys Gly Pro Glu Ala Leu Gly His Leu Leu Ser Arg Ala Arg Ser Pro
660 665 670

Glu Glu Leu Ser Leu Ala Thr Gln Leu Tyr Ala Gly Leu Val Val Ser
675 680 685

Leu Ser Gly Leu Leu Pro Leu Ala Phe Arg Ser Cys Leu Ala Arg Val
690 695 700

His Ala Gly Thr Leu Gln Pro Pro Phe Thr Ala Arg Phe Leu Arg Asn
705 710 715 720

Leu Ala Leu Leu Val Gly Trp Glu Gln Gln Gly Gly Glu Gly Pro Ala
725 730 735

Substitute Sequence Listing.ST25.txt

```

Ala Leu Gly Ala His Phe Gly Glu Ser Ala Ser Ala His Leu Ser Asp
      740      745      750

Leu Ala Pro Leu Leu Leu His Pro Glu Glu Glu Val Ala Glu Ala Ala
      755      760      765

Ala Ser Leu Leu Ala Ile Cys Pro Phe Pro Ser Glu Ala Leu Ser Pro
      770      775      780

Ser Gln Leu Leu Gly Leu Val Arg Ala Gly Val His Arg Phe Phe Ala
      785      790      795      800

Ser Leu Arg Leu His Gly Pro Pro Gly Val Ala Ser Ala Cys Gln Leu
      805      810      815

Leu Thr Arg Leu Ser Gln Thr Ser Pro Ala Gly Leu Lys Ala Val Leu
      820      825      830

Gln Leu Leu Val Glu Gly Ala Leu His Arg Gly Asn Thr Glu Leu Phe
      835      840      845

Gly Gly Gln Val Asp Gly Asp Asn Glu Thr Leu Ser Val Val Ser Ala
      850      855      860

Ser Leu Ala Ser Ala Ser Leu Leu Asp Thr Asn Arg Arg His Thr Ala
      865      870      875      880

Ala Val Pro Gly Pro Gly Gly Ile Trp Ser Val Phe His Ala Gly Val
      885      890      895

Ile Gly Arg Gly Leu Lys Pro Pro Lys Phe Val Gln Ser Arg Asn Gln
      900      905      910

Gln Glu Val Ile Tyr Asn Thr Gln Ser Leu Leu Ser Leu Leu Val His
      915      920      925

Cys Cys Ser Ala Pro Gly Gly Thr Glu Cys Gly Glu Cys Trp Gly Ala
      930      935      940

Pro Ile Leu Ser Pro Glu Ala Ala Lys Ala Val Ala Val Thr Leu Val
      945      950      955      960

Glu Ser Val Cys Pro Asp Ala Ala Gly Ala Glu Leu Ala Trp Pro Pro
      965      970      975

Glu Glu His Ala Arg Ala Thr Val Glu Arg Asp Leu Arg Ile Gly Arg
      980      985      990

Arg Phe Arg Glu Gln Pro Leu Leu Phe Glu Leu Leu Lys Leu Val Ala
      995      1000      1005

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Substitute Sequence Listing.ST25.txt

Ala Ala Pro Pro Ala Leu Cys Tyr Cys Ser Val Leu Leu Arg Gly
1010 1015 1020

Leu Leu Ala Ala Leu Leu Gly His Trp Glu Ala Ser Arg His Thr
1025 1030 1035

Asp Thr Thr His Ser Pro Trp His Leu Glu Ala Ser Cys Thr Leu
1040 1045 1050

Val Ala Val Met Ala Glu Gly Ser Leu Leu Pro Pro Ala Leu Gly
1055 1060 1065

Asn Met His Glu Val Phe Ser Gln Leu Ala Pro Phe Glu Val Arg
1070 1075 1080

Leu Leu Leu Leu Ser Val Trp Gly Phe Leu Arg Glu His Gly Pro
1085 1090 1095

Leu Pro Gln Lys Phe Ile Phe Gln Ser Glu Arg Gly Arg Phe Ile
1100 1105 1110

Arg Asp Phe Ser Arg Glu Gly Gly Gly Glu Gly Gly Pro His Leu
1115 1120 1125

Ala Val Leu His Ser Val Leu His Arg Asn Leu Asp Arg Leu Gly
1130 1135 1140

Leu Phe Ser Gly Arg Phe Gln Ala Pro Ser Pro Ser Thr Leu Leu
1145 1150 1155

Arg Gln Gly Thr
1160

<210> 15
<211> 170
<212> PRT
<213> Homo sapiens

<400> 15

Met Ala Leu Val Pro Gly Arg Ser Lys Glu Asp Gly Leu Trp Thr Arg
1 5 10 15

Asn Ser Pro Gly Ser Ser Gln His Pro Glu Ser Pro Arg Leu Pro Asn
20 25 30

Pro Leu Trp Asp Arg Gly Lys Ile Gly Lys Val Glu Gly His Gln His
35 40 45

Ile Gln Asp Phe Ser Gln Lys Ser His Leu Pro Ser Ile Val Val Glu
50 55 60

Substitute Sequence Listing.ST25.txt

Ser Ser Glu Val Asn Glu Glu Ser Gly Asp Leu His Leu Pro His Glu
65 70 75 80

Glu Leu Leu Leu Leu Thr Asp Gly Glu Glu Glu Asp Ala Glu Ala Phe
85 90 95

Phe Gln Asp Gln Ser Glu Glu Pro Gly Ala Ala Arg Pro His His Gln
100 105 110

Ala Arg Gln Val Glu His Ser Thr Gln Arg Gly His Leu Glu Ile Arg
115 120 125

Glu Leu Lys Lys Lys Leu Phe Lys Arg Arg Arg Val Leu Asn Arg Glu
130 135 140

Arg Arg Leu Arg His Arg Val Val Gly Ala Val Ile Asp Gln Gly Leu
145 150 155 160

Ile Thr Arg His His Leu Lys Lys Arg Ala
165 170

<210> 16
<211> 1019
<212> PRT
<213> Homo sapiens

<400> 16

Met Ser Ala Leu Cys Asp Pro Pro Gly Ala Pro Gly Pro Pro Gly Pro
1 5 10 15

Ala Pro Ala Thr His Gly Pro Ala Pro Leu Ser Ala Gln Glu Leu Ser
20 25 30

Gln Glu Ile Lys Ala Phe Leu Thr Gly Val Asp Pro Ile Leu Gly His
35 40 45

Gln Leu Ser Ala Arg Glu His Ala Arg Cys Gly Leu Leu Leu Leu Arg
50 55 60

Ser Leu Pro Pro Ala Arg Ala Ala Val Leu Asp His Leu Arg Gly Val
65 70 75 80

Phe Asp Glu Ser Val Arg Ala His Leu Ala Ala Leu Asp Glu Thr Pro
85 90 95

Val Ala Gly Pro Pro His Leu Arg Pro Pro Pro Pro Ser His Val Pro
100 105 110

Ala Gly Gly Pro Gly Leu Glu Asp Val Val Gln Glu Val Gln Gln Val
115 120 125

Leu Ser Glu Phe Ile Arg Ala Asn Pro Lys Ala Trp Ala Pro Val Ile
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Substitute Sequence Listing.ST25.txt

130

135

140

Ser Ala Trp Ser Ile Asp Leu Met Gly Gln Leu Ser Ser Thr Tyr Ser
145 150 155 160

Gly Gln His Gln Arg Val Pro His Ala Thr Gly Ala Leu Asn Glu Leu
165 170 175

Leu Gln Leu Trp Met Gly Cys Arg Ala Thr Arg Thr Leu Met Asp Ile
180 185 190

Tyr Val Gln Cys Leu Ser Ala Leu Ile Gly Ser Cys Pro Asp Ala Cys
195 200 205

Val Asp Ala Leu Leu Asp Thr Ser Val Gln His Ser Pro His Phe Asp
210 215 220

Trp Val Val Ala His Ile Gly Ser Ser Phe Pro Gly Thr Ile Ile Ser
225 230 235 240

Arg Val Leu Ser Cys Gly Leu Lys Asp Phe Cys Val His Gly Gly Ala
245 250 255

Gly Gly Gly Ala Gly Ser Ser Gly Gly Ser Ser Ser Gln Thr Pro Ser
260 265 270

Thr Asp Pro Phe Pro Gly Ser Pro Ala Ile Pro Ala Glu Lys Arg Val
275 280 285

Pro Lys Ile Ala Ser Val Val Gly Ile Leu Gly His Leu Ala Ser Arg
290 295 300

His Gly Asp Ser Ile Arg Arg Glu Leu Leu Arg Met Phe His Asp Ser
305 310 315 320

Leu Ala Gly Gly Ser Gly Gly Arg Ser Gly Asp Pro Ser Leu Gln Ala
325 330 335

Thr Val Pro Phe Leu Leu Gln Leu Ala Val Met Ser Pro Ala Leu Leu
340 345 350

Gly Thr Val Ser Gly Glu Leu Val Asp Cys Leu Lys Pro Pro Ala Val
355 360 365

Leu Ser Gln Leu Gln Gln His Leu Gln Gly Phe Pro Arg Glu Glu Leu
370 375 380

Asp Asn Met Leu Asn Leu Ala Val His Leu Val Ser Gln Ala Ser Gly
385 390 395 400

Ala Gly Ala Tyr Arg Leu Leu Gln Phe Leu Val Asp Thr Ala Met Pro
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Substitute Sequence Listing.ST25.txt
405 410 415

Ala Ser Val Ile Thr Thr Gln Gly Leu Ala Val Pro Asp Thr Val Arg
420 425 430

Glu Ala Cys Asp Arg Leu Ile Gln Leu Leu Leu Leu His Leu Gln Lys
435 440 445

Leu Val His His Arg Gly Gly Ser Pro Gly Glu Gly Val Leu Gly Pro
450 455 460

Pro Pro Pro Pro Arg Leu Val Pro Phe Leu Asp Ala Leu Lys Asn His
465 470 475 480

Val Gly Glu Leu Cys Gly Glu Thr Leu Arg Leu Glu Arg Lys Arg Phe
485 490 495

Leu Trp Gln His Gln Leu Leu Gly Leu Leu Ser Val Tyr Thr Arg Pro
500 505 510

Ser Cys Gly Pro Glu Ala Leu Gly His Leu Leu Ser Arg Ala Arg Ser
515 520 525

Pro Glu Glu Leu Ser Leu Ala Thr Gln Leu Tyr Ala Gly Leu Val Val
530 535 540

Ser Leu Ser Gly Leu Leu Pro Leu Ala Phe Arg Ser Cys Leu Ala Arg
545 550 555 560

Val His Ala Gly Thr Leu Gln Pro Pro Phe Thr Ala Arg Phe Leu Arg
565 570 575

Asn Leu Ala Leu Leu Val Gly Trp Glu Gln Gln Gly Gly Glu Gly Pro
580 585 590

Ala Ala Leu Gly Ala His Phe Gly Glu Ser Ala Ser Ala His Leu Ser
595 600 605

Asp Leu Ala Pro Leu Leu Leu His Pro Glu Glu Glu Val Ala Glu Ala
610 615 620

Ala Ala Ser Leu Leu Ala Ile Cys Pro Phe Pro Ser Glu Ala Leu Ser
625 630 635 640

Pro Ser Gln Leu Leu Gly Leu Val Arg Ala Gly Val His Arg Phe Phe
645 650 655

Ala Ser Leu Arg Leu His Gly Pro Pro Gly Val Ala Ser Ala Cys Gln
660 665 670

Leu Leu Thr Arg Leu Ser Gln Thr Ser Pro Ala Gly Leu Lys Ala Val
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Substitute Sequence Listing.ST25.txt

675

680

685

Leu Gln Leu Leu Val Glu Gly Ala Leu His Arg Gly Asn Thr Glu Leu
690 695 700

Phe Gly Gly Gln Val Asp Gly Asp Asn Glu Thr Leu Ser Val Val Ser
705 710 715 720

Ala Ser Leu Ala Ser Ala Ser Leu Leu Asp Thr Asn Arg Arg His Thr
725 730 735

Ala Ala Val Pro Gly Pro Gly Gly Ile Trp Ser Val Phe His Ala Gly
740 745 750

Val Ile Gly Arg Gly Leu Lys Pro Pro Lys Phe Val Gln Ser Arg Asn
755 760 765

Gln Gln Glu Val Ile Tyr Asn Thr Gln Ser Leu Leu Ser Leu Leu Val
770 775 780

His Cys Cys Ser Ala Pro Gly Gly Thr Glu Cys Gly Glu Cys Trp Gly
785 790 795 800

Ala Pro Ile Leu Ser Pro Glu Ala Ala Lys Ala Val Ala Val Thr Leu
805 810 815

Val Glu Ser Val Cys Pro Asp Ala Ala Gly Ala Glu Leu Ala Trp Pro
820 825 830

Pro Glu Glu His Ala Arg Ala Thr Val Glu Arg Asp Leu Arg Ile Gly
835 840 845

Arg Arg Phe Arg Glu Gln Pro Leu Leu Phe Glu Leu Leu Lys Leu Val
850 855 860

Ala Ala Ala Pro Pro Ala Leu Cys Tyr Cys Ser Val Leu Leu Arg Gly
865 870 875 880

Leu Leu Ala Ala Leu Leu Gly His Trp Glu Ala Ser Arg His Pro Asp
885 890 895

Thr Thr His Ser Pro Trp His Leu Glu Ala Ser Cys Thr Leu Val Ala
900 905 910

Val Met Ala Glu Gly Ser Leu Leu Pro Pro Ala Leu Gly Asn Met His
915 920 925

Glu Val Phe Ser Gln Leu Ala Pro Phe Glu Val Arg Leu Leu Leu Leu
930 935 940

Ser Val Trp Gly Phe Leu Arg Glu His Gly Pro Leu Pro Gln Lys Phe
945 950 955

Substitute Sequence Listing.ST25.txt

945

950

955

960

Ile Phe Gln Ser Glu Arg Gly Arg Phe Ile Arg Asp Phe Ser Arg Glu
965 970 975

Gly Gly Gly Glu Gly Gly Pro His Leu Ala Val Leu His Ser Val Leu
980 985 990

His Arg Asn Ile Asp Arg Leu Gly Leu Phe Ser Gly Arg Phe Gln Ala
995 1000 1005

Pro Ser Pro Ser Thr Leu Leu Arg Gln Gly Thr
1010 1015

<210> 17
<211> 908
<212> PRT
<213> Homo sapiens
<400> 17

Pro Ala Gly Gly Pro Gly Leu Glu Asp Val Val Gln Glu Val Gln Gln
1 5 10 15

Val Leu Ser Glu Phe Ile Arg Ala Asn Pro Lys Ala Trp Ala Pro Val
20 25 30

Ile Ser Ala Trp Ser Ile Asp Leu Met Gly Gln Leu Ser Ser Thr Tyr
35 40 45

Ser Gly Gln His Gln Arg Val Pro His Ala Thr Gly Ala Leu Asn Glu
50 55 60

Leu Leu Gln Leu Trp Met Gly Cys Arg Ala Thr Arg Thr Leu Met Asp
65 70 75 80

Ile Tyr Val Gln Cys Leu Ser Ala Leu Ile Gly Ser Cys Pro Asp Ala
85 90 95

Cys Val Asp Ala Leu Leu Asp Thr Ser Val Gln His Ser Pro His Phe
100 105 110

Asp Trp Val Val Ala His Ile Gly Ser Ser Phe Pro Gly Thr Ile Ile
115 120 125

Ser Arg Val Leu Ser Cys Gly Leu Lys Asp Phe Cys Val His Gly Gly
130 135 140

Ala Gly Gly Gly Ala Gly Ser Ser Gly Gly Ser Ser Ser Gln Thr Pro
145 150 155 160

Ser Thr Asp Pro Phe Pro Gly Ser Pro Ala Ile Pro Ala Glu Lys Arg
165 170 175

Substitute Sequence Listing.ST25.txt

Val Pro Lys Ile Ala Ser Val Val Gly Ile Leu Gly His Leu Ala Ser
180 185 190

Arg His Gly Asp Ser Ile Arg Arg Glu Leu Leu Arg Met Phe His Asp
195 200 205

Ser Leu Ala Gly Gly Ser Gly Gly Arg Ser Gly Asp Pro Ser Leu Gln
210 215 220

Ala Thr Val Pro Phe Leu Leu Gln Leu Ala Val Met Ser Pro Ala Leu
225 230 235 240

Leu Gly Thr Val Ser Gly Glu Leu Val Asp Cys Leu Lys Pro Pro Ala
245 250 255

Val Leu Ser Gln Leu Gln Gln His Leu Gln Gly Phe Pro Arg Glu Glu
260 265 270

Leu Asp Asn Met Leu Asn Leu Ala Val His Leu Val Ser Gln Ala Ser
275 280 285

Gly Ala Gly Ala Tyr Arg Leu Leu Gln Phe Leu Val Asp Thr Ala Met
290 295 300

Pro Ala Ser Val Ile Thr Thr Gln Gly Leu Ala Val Pro Asp Thr Val
305 310 315 320

Arg Glu Ala Cys Asp Arg Leu Ile Gln Leu Leu Leu Leu His Leu Gln
325, 330 335

Lys Leu Val His His Arg Gly Gly Ser Pro Gly Glu Gly Val Leu Gly
340 345 350

Pro Pro Pro Pro Pro Arg Leu Val Pro Phe Leu Asp Ala Leu Lys Asn
355 360 365

His Val Gly Glu Leu Cys Gly Glu Thr Leu Arg Leu Glu Arg Lys Arg
370 375 380

Phe Leu Trp Gln His Gln Leu Leu Gly Leu Leu Ser Val Tyr Thr Arg
385 390 395 400

Pro Ser Cys Gly Pro Glu Ala Leu Gly His Leu Leu Ser Arg Ala Arg
405 410 415

Ser Pro Glu Glu Leu Ser Leu Ala Thr Gln Leu Tyr Ala Gly Leu Val
420 425 430

Val Ser Leu Ser Gly Leu Leu Pro Leu Ala Phe Arg Ser Cys Leu Ala
435 440 445

Substitute Sequence Listing.ST25.txt

Arg Val His Ala Gly Thr Leu Gln Pro Pro Phe Thr Ala Arg Phe Leu
450 455 460

Arg Asn Leu Ala Leu Leu Val Gly Trp Glu Gln Gln Gly Gly Glu Gly
465 470 475 480

Pro Ala Ala Leu Gly Ala His Phe Gly Glu Ser Ala Ser Ala His Leu
485 490 495

Ser Asp Leu Ala Pro Leu Leu Leu His Pro Glu Glu Glu Val Ala Glu
500 505 510

Ala Ala Ala Ser Leu Leu Ala Ile Cys Pro Phe Pro Ser Glu Ala Leu
515 520 525

Ser Pro Ser Gln Leu Leu Gly Leu Val Arg Ala Gly Val His Arg Phe
530 535 540

Phe Ala Ser Leu Arg Leu His Gly Pro Pro Gly Val Ala Ser Ala Cys
545 550 555 560

Gln Leu Leu Thr Arg Leu Ser Gln Thr Ser Pro Ala Gly Leu Lys Ala
565 570 575

Val Leu Gln Leu Leu Val Glu Gly Ala Leu His Arg Gly Asn Thr Glu
580 585 590

Leu Phe Gly Gly Gln Val Asp Gly Asp Asn Glu Thr Leu Ser Val Val
595 600 605

Ser Ala Ser Leu Ala Ser Ala Ser Leu Leu Asp Thr Asn Arg Arg His
610 615 620

Thr Ala Ala Val Pro Gly Pro Gly Gly Ile Trp Ser Val Phe His Ala
625 630 635 640

Gly Val Ile Gly Arg Gly Leu Lys Pro Pro Lys Phe Val Gln Ser Arg
645 650 655

Asn Gln Gln Glu Val Ile Tyr Asn Thr Gln Ser Leu Leu Ser Leu Leu
660 665 670

Val His Cys Cys Ser Ala Pro Gly Gly Thr Glu Cys Gly Glu Cys Trp
675 680 685

Gly Ala Pro Ile Leu Ser Pro Glu Ala Ala Lys Ala Val Ala Val Thr
690 695 700

Leu Val Glu Ser Val Cys Pro Asp Ala Ala Gly Ala Glu Leu Ala Trp
705 710 715 720

Substitute Sequence Listing.ST25.txt

Pro Pro Glu Glu His Ala Arg Ala Thr Val Glu Arg Asp Leu Arg Ile
725 730 735

Gly Arg Arg Phe Arg Glu Gln Pro Leu Leu Phe Glu Leu Leu Lys Leu
740 745 750

Val Ala Ala Ala Pro Pro Ala Leu Cys Tyr Cys Ser Val Leu Leu Arg
755 760 765

Gly Leu Leu Ala Ala Leu Leu Gly His Trp Glu Ala Ser Arg His Pro
770 775 780

Asp Thr Thr His Ser Pro Trp His Leu Glu Ala Ser Cys Thr Leu Val
785 790 795 800

Ala Val Met Ala Glu Gly Ser Leu Leu Pro Pro Ala Leu Gly Asn Met
805 810 815

His Glu Val Phe Ser Gln Leu Ala Pro Phe Glu Val Arg Leu Leu Leu
820 825 830

Leu Ser Val Trp Gly Phe Leu Arg Glu His Gly Pro Leu Pro Gln Lys
835 840 845

Phe Ile Phe Gln Ser Glu Arg Gly Arg Phe Ile Arg Asp Phe Ser Arg
850 855 860

Glu Gly Gly Gly Glu Gly Gly Pro His Leu Ala Val Leu His Ser Val
865 870 875 880

Leu His Arg Asn Ile Asp Arg Leu Gly Leu Phe Ser Gly Arg Phe Gln
885 890 895

Ala Pro Ser Pro Ser Thr Leu Leu Arg Gln Gly Thr
900 905

<210> 18
<211> 833
<212> PRT
<213> Homo sapiens

<400> 18

Pro Arg Val Arg Asp Ile Tyr Val Gln Cys Leu Ser Ala Leu Ile Gly
1 5 10 15

Ser Cys Pro Asp Ala Cys Val Asp Ala Leu Leu Asp Thr Ser Val Gln
20 25 30

His Ser Pro His Phe Asp Trp Val Val Ala His Ile Gly Ser Ser Phe
35 40 45

Substitute Sequence Listing.ST25.txt

Pro Gly Thr Ile Ile Ser Arg Val Leu Ser Cys Gly Leu Lys Asp Phe
50 55 60

Cys Val His Gly Gly Ala Gly Gly Gly Ala Gly Ser Ser Gly Gly Ser
65 70 75 80

Ser Ser Gln Thr Pro Ser Thr Asp Pro Phe Pro Gly Ser Pro Ala Ile
85 90 95

Pro Ala Glu Lys Arg Val Pro Lys Ile Ala Ser Val Val Gly Ile Leu
100 105 110

Gly His Leu Ala Ser Arg His Gly Asp Ser Ile Arg Arg Glu Leu Leu
115 120 125

Arg Met Phe His Asp Ser Leu Ala Gly Gly Ser Gly Gly Arg Ser Gly
130 135 140

Asp Pro Ser Leu Gln Ala Thr Val Pro Phe Leu Leu Gln Leu Ala Val
145 150 155 160

Met Ser Pro Ala Leu Leu Gly Thr Val Ser Gly Glu Leu Val Asp Cys
165 170 175

Leu Lys Pro Pro Ala Val Leu Ser Gln Leu Gln Gln His Leu Gln Gly
180 185 190

Phe Pro Arg Glu Glu Leu Asp Asn Met Leu Asn Leu Ala Val His Leu
195 200 205

Val Ser Gln Ala Ser Gly Ala Gly Ala Tyr Arg Leu Leu Gln Phe Leu
210 215 220

Val Asp Thr Ala Met Pro Ala Ser Val Ile Thr Thr Gln Gly Leu Ala
225 230 235 240

Val Pro Asp Thr Val Arg Glu Ala Cys Asp Arg Leu Ile Gln Leu Leu
245 250 255

Leu Leu His Leu Gln Lys Leu Val His His Arg Gly Gly Ser Pro Gly
260 265 270

Glu Gly Val Leu Gly Pro Pro Pro Pro Pro Arg Leu Val Pro Phe Leu
275 280 285

Asp Ala Leu Lys Asn His Val Gly Glu Leu Cys Gly Glu Thr Leu Arg
290 295 300

Leu Glu Arg Lys Arg Phe Leu Trp Gln His Gln Leu Leu Gly Leu Leu
305 310 315 320

Substitute Sequence Listing.ST25.txt

Ser Val Tyr Thr Arg Pro Ser Cys Gly Pro Glu Ala Leu Gly His Leu
325 330 335

-- -- -- Leu Ser Arg Ala Arg Ser Pro Glu Glu Leu Ser Leu Ala Thr Gln Leu
340 345 350

Tyr Ala Gly Leu Val Val Ser Leu Ser Gly Leu Leu Pro Leu Ala Phe
355 360 365

Arg Ser Cys Leu Ala Arg Val His Ala Gly Thr Leu Gln Pro Pro Phe
370 375 380

Thr Ala Arg Phe Leu Arg Asn Leu Ala Leu Leu Val Gly Trp Glu Gln
385 390 395 400

Gln Gly Gly Glu Gly Pro Ala Ala Leu Gly Ala His Phe Gly Glu Ser
405 410 415

Ala Ser Ala His Leu Ser Asp Leu Ala Pro Leu Leu Leu His Pro Glu
420 425 430

Glu Glu Val Ala Glu Ala Ala Ala Ser Leu Leu Ala Ile Cys Pro Phe
435 440 445

Pro Ser Glu Ala Leu Ser Pro Ser Gln Leu Leu Gly Leu Val Arg Ala
450 455 460

Gly Val His Arg Phe Phe Ala Ser Leu Arg Leu His Gly Pro Pro Gly
465 470 475 480

Val Ala Ser Ala Cys Gln Leu Leu Thr Arg Leu Ser Gln Thr Ser Pro
485 490 495

Ala Gly Leu Lys Ala Val Leu Gln Leu Leu Val Glu Gly Ala Leu His
500 505 510

Arg Gly Asn Thr Glu Leu Phe Gly Gly Gln Val Asp Gly Asp Asn Glu
515 520 525

Thr Leu Ser Val Val Ser Ala Ser Leu Ala Ser Ala Ser Leu Leu Asp
530 535 540

Thr Asn Arg Arg His Thr Ala Ala Val Pro Gly Pro Gly Gly Ile Trp
545 550 555 560

Ser Val Phe His Ala Gly Val Ile Gly Arg Gly Leu Lys Pro Pro Lys
565 570 575

Phe Val Gln Ser Arg Asn Gln Gln Glu Val Ile Tyr Asn Thr Gln Ser
580 585 590

Substitute Sequence Listing.ST25.txt

Leu Leu Ser Leu Leu Val His Cys Cys Ser Ala Pro Gly Gly Thr Glu
595 600 605

Cys Gly Glu Cys Trp Gly Ala Pro Ile Leu Ser Pro Glu Ala Ala Lys
610 615 620

Ala Val Ala Val Thr Leu Val Glu Ser Val Cys Pro Asp Ala Ala Gly
625 630 635 640

Ala Glu Leu Ala Trp Pro Pro Glu Glu His Ala Arg Ala Thr Val Glu
645 650 655

Arg Asp Leu Arg Ile Gly Arg Arg Phe Arg Glu Gln Pro Leu Leu Phe
660 665 670

Glu Leu Leu Lys Leu Val Ala Ala Ala Pro Pro Ala Leu Cys Tyr Cys
675 680 685

Ser Val Leu Leu Arg Gly Leu Leu Ala Ala Leu Leu Gly His Trp Glu
690 695 700

Ala Ser Arg His Pro Asp Thr Thr His Ser Pro Trp His Leu Glu Ala
705 710 715 720

Ser Cys Thr Leu Val Ala Val Met Ala Glu Gly Ser Leu Leu Pro Pro
725 730 735

Ala Leu Gly Asn Met His Glu Val Phe Ser Gln Leu Ala Pro Phe Glu
740 745 750

Val Arg Leu Leu Leu Leu Ser Val Trp Gly Phe Leu Arg Glu His Gly
755 760 765

Pro Leu Pro Gln Lys Phe Ile Phe Gln Ser Glu Arg Gly Arg Phe Ile
770 775 780

Arg Asp Phe Ser Arg Glu Gly Gly Gly Glu Gly Gly Pro His Leu Ala
785 790 795 800

Val Leu His Ser Val Leu His Arg Asn Ile Asp Arg Leu Gly Leu Phe
805 810 815

Ser Gly Arg Phe Gln Ala Pro Ser Pro Ser Thr Leu Leu Arg Gln Gly
820 825 830

Thr

<210> 19
<211> 963
<212> PRT

Substitute Sequence Listing.ST25.txt

<213> Mus musculus

<400> 19

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Met Ile Leu Met Ile Thr Leu Phe Thr Thr Ala Thr Phe Leu Val Leu
 1           5           10           15

Gly Val Ser Val Trp Val Leu Ile Lys Glu Ile Leu Thr Val His Val
          20           25           30

Pro Pro Pro Ile Pro Gln Arg Val Lys Phe His Met Leu His Tyr Phe
 35           40           45

Phe Gln Leu Thr Ile Ala Leu Gly Asn Val Leu Glu Lys Met Lys Ile
 50           55           60

Cys Pro Met Pro Arg Phe Phe Cys Phe Ile Gln Asp Leu Leu Val Ser
 65           70           75           80

Lys Asn Asn Phe Gly Val Leu Val Lys Asn Met His Phe Gly Thr Ile
          85           90           95

Pro Val Arg Leu Phe Gln Pro Lys Ala Thr Ser Ser Gly Pro Arg Lys
          100          105          110

Gly Ile Ile Phe Tyr His Gly Gly Gly Gly Val Phe Gly Ser Leu Asp
      115          120          125

Ser Tyr His Asn Thr Cys Ser Tyr Leu Ala His Glu Thr Asp Ser Val
      130          135          140

Val Met Ala Val Gly Tyr Arg Lys Leu Pro Asp His His His Pro Thr
      145          150          155          160

Ala Tyr His Asp Cys Leu Asn Ala Thr Val His Phe Leu Lys Glu Leu
          165          170          175

Lys Thr Tyr Gly Val Asp Pro Ala Arg Val Val Val Ser Gly Glu Ser
          180          185          190

Ile Gly Ala Gly Ala Ala Ala Ile Ile Ala Gln Val Val Leu Ala Arg
      195          200          205

Lys Asp Leu Pro Gln Phe Arg Ala Gln Val Leu Ile Asn Pro Val Val
      210          215          220

Gln Gly Val Asn Phe Gln Leu Pro Ser Tyr Gln Gln Tyr Ser Asp Val
      225          230          235          240

Pro Phe Leu Ser Arg Lys Phe Leu Met Thr Cys Ala Cys Lys Tyr Leu
          245          250          255

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Substitute Sequence Listing.ST25.txt

Ala Ile Asp Gln Ser Trp Lys Asp Ala Met Leu Lys Gly Thr Phe Ile
260 265 270

Pro Pro Asp His Trp Lys Lys Tyr Ala Lys Trp Leu Ser Ser Asp Asn
275 280 285

Ile Pro Gln Arg Phe Lys Ser Gln Gly Arg Gln Pro Glu Phe Pro Gly
290 295 300

Pro Phe Asn Glu Ser Ala Tyr Leu Glu Thr Asn His Ile Phe Ser Leu
305 310 315 320

Glu Thr Ser Pro Leu Leu Ala Asp Asp Lys Ile Ile Ala Gln Leu Pro
325 330 335

Glu Thr Phe Leu Val Ser Ser Glu Tyr Asp Val Leu Arg Asp Asp Thr
340 345 350

Leu Leu Tyr Lys Lys Arg Leu Glu Glu Gln Gly Val Pro Val Thr Trp
355 360 365

Leu Trp Val Gly Leu Pro Asp Val Arg Val Val Pro Leu Ser Gln Gly
370 375 380

Pro Arg Ala Pro Gly Pro Pro Gly Pro Ala Pro Ala Thr His Gly Pro
385 390 395 400

Val Pro Leu Ser Ala Gln Glu Leu Ser Gln Glu Ile Lys Ala Phe Leu
405 410 415

Thr Gly Val Asp Pro Ile Leu Gly His Gln Leu Ser Ala Arg Glu His
420 425 430

Ala Gln Cys Gly Leu Leu Leu Leu Arg Ser Leu Pro Pro Ala Gln Ala
435 440 445

Ala Val Leu Asp His Leu Arg Gly Val Phe Asp Glu Ser Val Gln Ala
450 455 460

His Leu Ala Ala Leu Glu Glu Ser Pro Val Ala Gly Pro Pro His Leu
465 470 475 480

Arg Pro Pro Ser Pro Ser His Val Pro Thr Gly Gly Pro Gly Leu Glu
485 490 495

Asp Val Val His Glu Val Gln Gln Val Leu Cys Glu Phe Ile Arg Ala
500 505 510

Asn Pro Lys Val Trp Ala Pro Val Ile Ser Ala Trp Ser Ile Asp Leu
515 520 525

Substitute Sequence Listing.ST25.txt

Met Gly Gln Leu Ser Ser Thr Tyr Ser Gly Gln His Gln Arg Val Pro
530 535 540

His Ala Thr Gly Ser Arg Asn Glu Leu Leu Gln Leu Trp Met Ser Cys
545 550 555 560

Arg Asp Thr Arg Thr Leu Met Asp Ile Tyr Val Gln Cys Leu Ser Ala
565 570 575

Leu Ile Gly Ser Cys Pro Asp Ala Tyr Ser Phe Pro Gly Phe Pro Ala
580 585 590

Ile Pro Gly Glu Lys Arg Val Pro Lys Ile Ala Ser Ala Val Gly Ile
595 600 605

Gln Val Thr Trp Leu Ser Ala Met Glu Thr Ala Ser Asp Gly Asn Cys
610 615 620

Cys Ala Cys Phe Met Ile Val Trp Gln Arg Phe Leu Val Asp Thr Ala
625 630 635 640

Met Pro Ala Ala Val Ile Thr Thr Gln Gly Leu Ala Val Pro Asp Thr
645 650 655

Met Arg Glu Ala Tyr Asp Arg Leu Ile Gln Leu Leu Leu Leu His Leu
660 665 670

Gln Lys Leu Val His His Arg Gly Gly Ala Pro Gly Glu Gly Val Leu
675 680 685

Gly Pro Pro Ser Pro Pro Leu Pro Val Pro Phe Leu Asp Ala Leu Arg
690 695 700

Asn His Val Gly Glu Leu Cys Gly Lys Thr Leu Arg Leu Glu Arg Lys
705 710 715 720

Arg Phe Leu Trp Gln His Gln Leu Leu Ala Tyr Ser Trp Phe Leu Arg
725 730 735

Lys Leu Ala Leu Leu Val Gly Trp Glu Gln Gln Gly Asp Glu Gly Pro
740 745 750

Ser Ala Leu Gly Ala Arg Phe Gly Glu Ser Ala Ser Ala His Leu Ser
755 760 765

Asp Leu Ala Pro Leu Leu Leu His Pro Glu Glu Glu Val Ala Glu Ala
770 775 780

Ala Ala Ser Leu Leu Ala Val Cys Pro Phe Pro Ser Glu Ala Leu Ser
785 790 795 800

Substitute Sequence Listing.ST25.txt

Pro Ser Gln Leu Leu Gly Leu Val Arg Ala Gly Val His His Phe Phe
805 810 815

Asn Ser Leu Arg Leu His Gly Pro Pro Gly Val Ala Ser Ala Ser Gln
820 825 830

Leu Leu Thr Arg Leu Ser Gln Thr Ser Pro Ala Gly Leu Lys Ala Val
835 840 845

Leu Gln Leu Leu Val Glu Val Ala Leu His Arg Gly Asn Thr Glu Leu
850 855 860

Phe Gly Glu Glu Met Val Gly Asp Asn Glu Thr Leu Ser Ile Val Ser
865 870 875 880

Thr Pro Leu Ala Ser Ala Ser Leu Leu Asp Ile Asn Arg Arg His Thr
885 890 895

Ala Ala Val Pro Gly Pro Gly Gly Ile Trp Ser Val Phe His Ala Gly
900 905 910

Val Ile Gly Arg Gly Leu Lys Ser Pro Lys Ile Val Gln Ser Arg Asn
915 920 925

His Gln Glu Val Ile Tyr Asn Thr Gln Ser Leu Ile Ser Leu Leu Val
930 935 940

His Cys Cys Ser Ala Ser Gly Ser Ser Glu His Lys Gly Tyr Trp Gly
945 950 955 960

Ala Pro Thr

<210> 20
<211> 900
<212> PRT
<213> Anopheles gambiae

<400> 20

Lys Asn Leu Pro Asp Pro Ser Val Asp Asp Glu Ala Val Gln Glu Ile
1 5 10 15

His Glu Ala Leu Glu Arg Leu Val Thr Val Gly Pro Thr Ala Trp Cys
20 25 30

Pro Val Ile Ser Ser Trp Cys Leu Lys Leu Leu Gly Glu Val Cys Lys
35 40 45

Lys His Cys Arg Arg Arg Pro Pro Asp Ile Arg Gly Ala Cys Asn Leu
50 55 60

Trp Leu Gly Cys Ser Ala Ile Arg Tyr Leu Leu Ser Leu Ser Ala Leu
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Substitute Sequence Listing.ST25.txt

65

70

75

80

Cys Phe Glu Lys Leu Asp Gln Arg Glu Met Asp Glu Cys Ile Asn Glu
85 90 95

Met Leu Val Ile Tyr Gly Thr His Thr Pro Phe Phe Asp Trp Val Val
100 105 110

Ala Arg Leu Gly Gly Cys Phe Pro Leu Arg Val Met Ser Ser Met Leu
115 120 125

Ser Met Gly Val Ala Arg Phe Thr Gly Asp Phe Asp Gln Pro Ser Glu
130 135 140

Ser Glu Val Glu Val Leu Ser Tyr Leu Gly Leu Ala His Glu Ser Asp
145 150 155 160

Leu Arg Lys Ala Leu Lys Ser Thr Leu Glu His Val Ala Ser Tyr Lys
165 170 175

Gln Pro Ile Pro Tyr Leu Leu Met Leu Ala Lys Ala Ser Glu Thr Ile
180 185 190

Ser Gln Ala Leu Val Ala Val Phe Leu Glu Leu His Asp Glu Asn Arg
195 200 205

Leu Pro Thr Leu Thr Val Leu Pro Lys Asn Trp Pro Ala Asn Ile Gly
210 215 220

Leu Pro Tyr Val Leu His Thr Val Ala Gly Leu Leu Leu Lys Met Lys
225 230 235 240

Lys His Ala Ile Arg Val Thr Leu Ile Leu Ala Lys Met Ser Thr Gln
245 250 255

His Ser Trp Cys Gln Glu Leu Leu Glu Met Met Phe Ile Glu Leu Glu
260 265 270

Thr Leu Val Leu Asp Lys His Thr Ala Ala Leu Leu Glu Asp Ile Ile
275 280 285

Arg Asp Gly Met Arg Glu Met Leu Trp Asn Ser Cys Thr Ser Asp Val
290 295 300

Pro Tyr Leu Gln Gln Val Ala Val Arg Leu Ile Leu Leu Ala Ser Phe
305 310 315 320

Lys Ser Asn Ser Val Phe His Gln Thr Ile Val Tyr Leu Leu Ser Val
325 330 335

Ser Glu Pro Ala Leu Ala Val Ser Thr Lys Pro His Leu Asn Ala Leu
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Substitute Sequence Listing.ST25.txt

340

345

350

Val Arg Val Leu Gly Gly Pro His Gly Thr Val Asp Val Pro Lys Val
355 360 365

Lys Pro Ala Phe Glu Thr Ala Phe Glu Lys Ile Leu Ile Ser Pro Cys
370 375 380

Lys Arg Val Glu Cys Trp Asn Ile Leu His Asn Leu Val Glu Leu Leu
385 390 395 400

Lys Leu Glu Arg Thr Ala Ile Leu Gly Ser Thr Leu Arg Lys Val Asn
405 410 415

Cys Thr Gly Met Met His Glu Leu Leu Asp Arg Val Leu Lys Ile Trp
420 425 430

Glu Asn Phe Met Ser Arg Glu Arg Gln Asp Asp Thr Gln Gly Gly Gly
435 440 445

Cys Thr Val Arg Ala Thr Gln Glu Val Gln Glu Asn Ala Asn Glu Pro
450 455 460

Gly Lys Arg Val Lys Asn Glu Arg Pro Glu Pro Met Glu Thr Asp Glu
465 470 475 480

Gln His Arg Leu Gly Thr Gly Ser Arg Thr Val Thr Tyr Lys Asp Leu
485 490 495

Ile His Glu Thr Val Arg Leu Ile Glu Cys Met Asp Leu Gly Lys Ser
500 505 510

Val Thr Ile Gly Thr Ala Gln Thr Leu Lys Leu Ser Gln Leu Leu Val
515 520 525

Lys Tyr Phe Phe Tyr Cys Leu Lys Leu Ser Thr Ala Gly Thr Ser Val
530 535 540

Pro Ser Gly Thr Val Pro Glu Ser Leu Asp Glu Ser Leu Asn Arg Val
545 550 555 560

Tyr Ser Leu Leu Ser Lys His Cys Gly His Arg Lys Ala Ala Arg Thr
565 570 575

Ala Ala Leu Arg Glu Leu Leu Glu Gly Ala Leu Phe Leu Tyr Gly Asp
580 585 590

Leu Phe Gly Ser Gln Ala Glu Ser Gln Ala Tyr Ser Phe Asp Lys Pro
595 600 605

Asp Asp Leu Leu Ile Arg Leu Asn Gln Lys Gln Gly Ile Ala Leu Asn
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Substitute Sequence Listing.ST25.txt

610

615

620

Ala Ser Arg Ala Thr Val Leu His Ala Gly Ile Ile Gly Gln Gly Pro
625 630 635 640

Lys Ile Pro Ser Lys Lys Ala Val Gly Pro Ala Ser Glu Met Gln Asn
645 650 655

His Leu Leu Asn Ala Ile Val Ala Cys Cys Gln Asp Val Asn Asp His
660 665 670

Gln Ala Thr Ile Asp Gly Phe Ser Tyr Val Ser Leu Leu Leu Val Glu
675 680 685

Met Ile Ser Pro Asp Val Met Tyr Asn Gly Leu Pro Trp Pro Glu Glu
690 695 700

Asp Phe Ile Arg Val Thr Met Glu Arg Asp Leu Gln Ile Gln Arg Thr
705 710 715 720

Phe Arg His Ser Pro Ile Leu Trp Ser Ile Leu Gly Leu Val Ala Cys
725 730 735

Tyr Arg Pro Ser Leu Cys Tyr Cys Ser Val Leu Leu Arg Ala Leu Cys
740 745 750

Ala Ser Ala Leu His Gln Trp Arg Ser Lys Thr Ala Glu Thr Leu Asn
755 760 765

Gly Gln Lys Thr Asp Leu Leu Tyr Met Thr Thr Lys Leu Leu Glu Leu
770 775 780

Met Ala Leu Ala Gln Leu Leu Pro Pro Pro Leu Ser Tyr Leu His Ile
785 790 795 800

Val Leu Glu Tyr Phe Asp Gly Pro Glu Ile Ala Tyr Val Leu Lys Glu
805 810 815

Cys Val Trp Asn Tyr Met Lys Asp His Val Pro Ser Pro Val Leu Phe
820 825 830

Val Cys Asp Pro Thr Gly Phe His Trp Arg Asp Pro Leu Thr Ser Arg
835 840 845

Pro Pro Leu Gln Tyr Thr Asn Pro Leu Arg Asn Thr Met Gln Lys Lys
850 855 860

Leu Thr Lys Val Gly His Leu Tyr His Gln Met Phe Val Gly Pro Glu
865 870 875 880

Leu Arg Asn Pro Ser Ala Ser Asn Ser Gly Gln Pro Thr Gln Gln Pro
Page 79

Leu Val Gln Gly
900

<210> 21
<211> 27
<212> PRT
<213> Homo sapiens

<400> 21

Met Ser Ala Leu Cys Asp Pro Pro Gly Ala Pro Gly Pro Pro Gly Pro
1 5 10 15

Ala Pro Ala Thr His Gly Pro Ala Pro Leu Ser
20 25